# sg13g2_stdcell_fast_1p65V_m40C Library

| Cell Groups |
|---|
| **A21OIx** |
| **A221OI** |
| **A22OI** |
| **AND2x** |
| **AND3x** |
| **AND4x** |
| **AO21x** |
| **BTLx** |
| **BUx** |
| **DECAPx** |
| **DFFRRx** |
| **DLHQ** |
| **DLHRQ** |
| **DLHR** |
| **DLLRQ** |
| **DLLR** |
| **DLY1** |
| **DLY2** |
| **DLY4** |
| **EINVINx** |
| **FILLx** |
| **GCLK** |
| **INx** |

| |
|---|
| **ITL** |
| **KEEPSTATE** |
| **MUX2x** |
| **MUX4** |
| **NAND2B1** |
| **NAND2B2** |
| **NAND2x** |
| **NAND3B1** |
| **NAND3** |
| **NAND4** |
| **NOR2Bx** |
| **NOR2x** |
| **NOR3x** |
| **NOR4x** |
| **NP_ANT** |
| **O21AI** |
| **OR2x** |
| **OR3x** |
| **OR4x** |
| **SDFRRS** |
| **SGCLK** |
| **TIE0** |
| **TIE1** |
| **XNOR2_1** |
| **XOR2_1** |

# A21OIx

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A1 | A2 | B1 | Y |
| 0 | x | 0 | 1 |
| x | x | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 1 | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_a21oi_2 | 14.51520 |
| sg13g2_a21oi_1 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A1 | A2 | B1 | Y |
| sg13g2_a21oi_2 | 0.00601 | 0.00666 | 0.00587 | 0.60000 |
| sg13g2_a21oi_1 | 0.00312 | 0.00332 | 0.00299 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|:---:|:---:|:---:|:---:|
| | Min. | Avg | Max. |
| **sg13g2_a21oi_2** | 823.98800 | 2427.10000 | 3998.11000 |
| **sg13g2_a21oi_1** | 411.99300 | 1213.55000 | 1999.05000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | A1->Y (FR) | 0.01860 | 0.00100 | **0.02133** | 0.32940 | 0.12960 | **0.26652** | 2.50740 | 0.60000 | **1.35444** |
| | A2->Y (FR) | 0.01860 | 0.00100 | **0.02592** | 0.32940 | 0.12960 | **0.27077** | 2.50740 | 0.60000 | **1.36265** |
| | B1->Y (FR) | 0.01860 | 0.00100 | **0.02164** | 0.32940 | 0.12960 | **0.30588** | 2.50740 | 0.60000 | **1.62217** |
| sg13g2_a21oi_1 | A1->Y (FR) | 0.01860 | 0.00100 | **0.02334** | 0.32940 | 0.06480 | **0.26582** | 2.50740 | 0.30000 | **1.35159** |
| | A2->Y (FR) | 0.01860 | 0.00100 | **0.02774** | 0.32940 | 0.06480 | **0.27113** | 2.50740 | 0.30000 | **1.36348** |
| | B1->Y (FR) | 0.01860 | 0.00100 | **0.02344** | 0.32940 | 0.06480 | **0.30631** | 2.50740 | 0.30000 | **1.62418** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | A1->Y (RF) | 0.01860 | 0.00100 | **0.02034** | 0.32940 | 0.12960 | **0.26750** | 2.50740 | 0.60000 | **1.39780** |
| | A2->Y (RF) | 0.01860 | 0.00100 | **0.02174** | 0.32940 | 0.12960 | **0.23684** | 2.50740 | 0.60000 | **1.20016** |
| | B1->Y (RF) | 0.01860 | 0.00100 | **0.01071** | 0.32940 | 0.12960 | **0.19227** | 2.50740 | 0.60000 | **1.03606** |
| sg13g2_a21oi_1 | A1->Y (RF) | 0.01860 | 0.00100 | **0.02214** | 0.32940 | 0.06480 | **0.26750** | 2.50740 | 0.30000 | **1.39643** |
| | A2->Y (RF) | 0.01860 | 0.00100 | **0.02326** | 0.32940 | 0.06480 | **0.23664** | 2.50740 | 0.30000 | **1.19810** |
| | B1->Y (RF) | 0.01860 | 0.00100 | **0.01199** | 0.32940 | 0.06480 | **0.19271** | 2.50740 | 0.30000 | **1.03860** |

**Delay(ns) to Y rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | B1->Y (FR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02164** | 0.32940 | 0.12960 | **0.30588** | 2.50740 | 0.60000 | **1.62217** |
| | B1->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01626** | 0.32940 | 0.12960 | **0.30134** | 2.50740 | 0.60000 | **1.62204** |
| | B1->Y (FR) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01377** | 0.32940 | 0.12960 | **0.25437** | 2.50740 | 0.60000 | **1.38703** |
| sg13g2_a21oi_1 | B1->Y (FR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02344** | 0.32940 | 0.06480 | **0.30631** | 2.50740 | 0.30000 | **1.62418** |
| | B1->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01824** | 0.32940 | 0.06480 | **0.29971** | 2.50740 | 0.30000 | **1.61240** |
| | B1->Y (FR) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01548** | 0.32940 | 0.06480 | **0.25399** | 2.50740 | 0.30000 | **1.38401** |

**Delay(ns) to Y falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | B1->Y (RF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.01133** | 0.32940 | 0.12960 | **0.19364** | 2.50740 | 0.60000 | **1.03174** |
| | B1->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01096** | 0.32940 | 0.12960 | **0.19192** | 2.50740 | 0.60000 | **1.02929** |
| | B1->Y (RF) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01071** | 0.32940 | 0.12960 | **0.19227** | 2.50740 | 0.60000 | **1.03606** |
| sg13g2_a21oi_1 | B1->Y (RF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.01260** | 0.32940 | 0.06480 | **0.19420** | 2.50740 | 0.30000 | **1.03359** |
| | B1->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01223** | 0.32940 | 0.06480 | **0.19251** | 2.50740 | 0.30000 | **1.03143** |
| | B1->Y (RF) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01199** | 0.32940 | 0.06480 | **0.19271** | 2.50740 | 0.30000 | **1.03860** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | A1 | 0.01860 | 0.00100 | **0.01410** | 0.32940 | 0.12960 | **0.02050** | 2.50740 | 0.60000 | **0.09616** |
| | A2 | 0.01860 | 0.00100 | **0.01806** | 0.32940 | 0.12960 | **0.02369** | 2.50740 | 0.60000 | **0.10365** |
| | B1 | 0.01860 | 0.00100 | **0.00944** | 0.32940 | 0.12960 | **0.01879** | 2.50740 | 0.60000 | **0.10551** |
| sg13g2_a21oi_1 | A1 | 0.01860 | 0.00100 | **0.00721** | 0.32940 | 0.06480 | **0.01030** | 2.50740 | 0.30000 | **0.04828** |
| | A2 | 0.01860 | 0.00100 | **0.00899** | 0.32940 | 0.06480 | **0.01184** | 2.50740 | 0.30000 | **0.05172** |
| | B1 | 0.01860 | 0.00100 | **0.00459** | 0.32940 | 0.06480 | **0.00921** | 2.50740 | 0.30000 | **0.05252** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | A1 | 0.01860 | 0.00100 | **0.01258** | 0.32940 | 0.12960 | **0.01908** | 2.50740 | 0.60000 | **0.08925** |
| | A2 | 0.01860 | 0.00100 | **0.01697** | 0.32940 | 0.12960 | **0.02282** | 2.50740 | 0.60000 | **0.09655** |
| | B1 | 0.01860 | 0.00100 | **0.00530** | 0.32940 | 0.12960 | **0.01495** | 2.50740 | 0.60000 | **0.09921** |
| sg13g2_a21oi_1 | A1 | 0.01860 | 0.00100 | **0.00678** | 0.32940 | 0.06480 | **0.01001** | 2.50740 | 0.30000 | **0.04517** |
| | A2 | 0.01860 | 0.00100 | **0.00889** | 0.32940 | 0.06480 | **0.01182** | 2.50740 | 0.30000 | **0.04870** |
| | B1 | 0.01860 | 0.00100 | **0.00319** | 0.32940 | 0.06480 | **0.00794** | 2.50740 | 0.30000 | **0.05080** |

**Internal switching power(pJ) to Y rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00944** | 0.32940 | 0.12960 | **0.01879** | 2.50740 | 0.60000 | **0.10551** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00809** | 0.32940 | 0.12960 | **0.01777** | 2.50740 | 0.60000 | **0.10462** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00827** | 0.32940 | 0.12960 | **0.01891** | 2.50740 | 0.60000 | **0.11532** |
| sg13g2_a21oi_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00459** | 0.32940 | 0.06480 | **0.00921** | 2.50740 | 0.30000 | **0.05252** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00407** | 0.32940 | 0.06480 | **0.00893** | 2.50740 | 0.30000 | **0.05254** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00414** | 0.32940 | 0.06480 | **0.00952** | 2.50740 | 0.30000 | **0.05784** |

**Internal switching power(pJ) to Y falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21oi_2 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01256** | 0.32940 | 0.12960 | **0.02132** | 2.50740 | 0.60000 | **0.09767** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00569** | 0.32940 | 0.12960 | **0.01450** | 2.50740 | 0.60000 | **0.09203** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00530** | 0.32940 | 0.12960 | **0.01495** | 2.50740 | 0.60000 | **0.09921** |
| sg13g2_a21oi_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00685** | 0.32940 | 0.06480 | **0.01112** | 2.50740 | 0.30000 | **0.04929** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00339** | 0.32940 | 0.06480 | **0.00777** | 2.50740 | 0.30000 | **0.04628** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00319** | 0.32940 | 0.06480 | **0.00794** | 2.50740 | 0.30000 | **0.05080** |

**Passive power(pJ) for A1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | 0.01860 | **-0.00271** | 0.32940 | **-0.00269** | 2.50740 | **-0.00268** |
| sg13g2_a21oi_1 | 0.01860 | **-0.00125** | 0.32940 | **-0.00124** | 2.50740 | **-0.00125** |

**Passive power(pJ) for A1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | 0.01860 | **0.00278** | 0.32940 | **0.00278** | 2.50740 | **0.00280** |
| sg13g2_a21oi_1 | 0.01860 | **0.00125** | 0.32940 | **0.00124** | 2.50740 | **0.00125** |

**Passive power(pJ) for A1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | B1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A2 * !B1) | 0.01860 | **-0.00271** | 0.32940 | **-0.00269** | 2.50740 | **-0.00268** |
| sg13g2_a21oi_1 | B1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A2 * !B1) | 0.01860 | **-0.00125** | 0.32940 | **-0.00124** | 2.50740 | **-0.00125** |

**Passive power(pJ) for A1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A2 * !B1)** | 0.01860 | **0.00278** | 0.32940 | **0.00278** | 2.50740 | **0.00280** |
| sg13g2_a21oi_1 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A2 * !B1)** | 0.01860 | **0.00125** | 0.32940 | **0.00124** | 2.50740 | **0.00125** |

**Passive power(pJ) for A2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A1 * !B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_a21oi_1 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A1 * !B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21oi_2 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A1 * !B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_a21oi_1 | **B1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A1 * !B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | **(A1 * A2)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | **(A1 * A2)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21oi_2** | **(A1 * A2)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21oi_1** | **(A1 * A2)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

# A221OI

## Truth Table

| INPUT | | | | | OUTPUT |
|---|---|---|---|---|---|
| A1 | A2 | B1 | B2 | C1 | Y |
| 0 | x | 0 | x | 0 | 1 |
| 0 | x | x | x | 1 | 0 |
| 0 | x | 1 | 0 | 0 | 1 |
| x | x | 1 | 1 | x | 0 |
| 1 | 0 | 0 | x | 0 | 1 |
| 1 | 0 | x | x | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | x | x | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_a221oi_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | | Max Cap(pf) |
|---|---|---|---|---|---|---|
| | A1 | A2 | B1 | B2 | C1 | Y |
| sg13g2_a221oi_1 | 0.00327 | 0.00337 | 0.00299 | 0.00310 | 0.00271 | 0.60000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|:---:|:---:|:---:|:---:|
| | Min. | Avg | Max. |
| **sg13g2_a221oi_1** | 615.40700 | 1955.81000 | 3301.51000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1->Y (FR) | 0.01860 | 0.00100 | **0.04350** | 0.32940 | 0.12960 | **0.61014** | 2.50740 | 0.60000 | **2.84463** |
| | A2->Y (FR) | 0.01860 | 0.00100 | **0.04978** | 0.32940 | 0.12960 | **0.61470** | 2.50740 | 0.60000 | **2.84645** |
| | B1->Y (FR) | 0.01860 | 0.00100 | **0.04560** | 0.32940 | 0.12960 | **0.64047** | 2.50740 | 0.60000 | **3.09647** |
| | B2->Y (FR) | 0.01860 | 0.00100 | **0.05165** | 0.32940 | 0.12960 | **0.64413** | 2.50740 | 0.60000 | **3.09698** |
| | C1->Y (FR) | 0.01860 | 0.00100 | **0.03398** | 0.32940 | 0.12960 | **0.65987** | 2.50740 | 0.60000 | **3.33119** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1->Y (RF) | 0.01860 | 0.00100 | **0.02896** | 0.32940 | 0.12960 | **0.42798** | 2.50740 | 0.60000 | **2.19711** |
| | A2->Y (RF) | 0.01860 | 0.00100 | **0.02965** | 0.32940 | 0.12960 | **0.38976** | 2.50740 | 0.60000 | **1.92826** |
| | B1->Y (RF) | 0.01860 | 0.00100 | **0.02497** | 0.32940 | 0.12960 | **0.41954** | 2.50740 | 0.60000 | **2.18568** |
| | B2->Y (RF) | 0.01860 | 0.00100 | **0.02597** | 0.32940 | 0.12960 | **0.38161** | 2.50740 | 0.60000 | **1.91699** |
| | C1->Y (RF) | 0.01860 | 0.00100 | **0.01455** | 0.32940 | 0.12960 | **0.29600** | 2.50740 | 0.60000 | **1.58859** |

**Delay(ns) to Y rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1->Y (FR) | (B1 * !B2) | 0.01860 | 0.00100 | **0.05078** | 0.32940 | 0.12960 | **0.61527** | 2.50740 | 0.60000 | **2.84319** |
| | A1->Y (FR) | (!B1 * B2) | 0.01860 | 0.00100 | **0.04350** | 0.32940 | 0.12960 | **0.61014** | 2.50740 | 0.60000 | **2.84463** |
| | A1->Y (FR) | (!B1 * !B2) | 0.01860 | 0.00100 | **0.04012** | 0.32940 | 0.12960 | **0.53245** | 2.50740 | 0.60000 | **2.52780** |
| | A2->Y (FR) | (B1 * !B2) | 0.01860 | 0.00100 | **0.05681** | 0.32940 | 0.12960 | **0.61970** | 2.50740 | 0.60000 | **2.84485** |
| | A2->Y (FR) | (!B1 * B2) | 0.01860 | 0.00100 | **0.04978** | 0.32940 | 0.12960 | **0.61470** | 2.50740 | 0.60000 | **2.84645** |
| | A2->Y (FR) | (!B1 * !B2) | 0.01860 | 0.00100 | **0.04525** | 0.32940 | 0.12960 | **0.53588** | 2.50740 | 0.60000 | **2.52845** |
| | B1->Y (FR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.04560** | 0.32940 | 0.12960 | **0.64047** | 2.50740 | 0.60000 | **3.09647** |
| | B1->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.03824** | 0.32940 | 0.12960 | **0.63440** | 2.50740 | 0.60000 | **3.09417** |
| | B1->Y (FR) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.03266** | 0.32940 | 0.12960 | **0.54239** | 2.50740 | 0.60000 | **2.67281** |
| | B2->Y (FR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.05165** | 0.32940 | 0.12960 | **0.64413** | 2.50740 | 0.60000 | **3.09698** |
| | B2->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.04456** | 0.32940 | 0.12960 | **0.63816** | 2.50740 | 0.60000 | **3.09492** |
| | B2->Y (FR) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.03779** | 0.32940 | 0.12960 | **0.54516** | 2.50740 | 0.60000 | **2.67216** |
| | C1->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.03398** | 0.32940 | 0.12960 | **0.65987** | 2.50740 | 0.60000 | **3.33119** |

**Delay(ns) to Y falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1->Y (RF) | (B1 * !B2) | 0.01860 | 0.00100 | **0.02872** | 0.32940 | 0.12960 | **0.42815** | 2.50740 | 0.60000 | **2.19417** |
| | A1->Y (RF) | (!B1 * B2) | 0.01860 | 0.00100 | **0.02771** | 0.32940 | 0.12960 | **0.42580** | 2.50740 | 0.60000 | **2.19315** |
| | A1->Y (RF) | (!B1 * !B2) | 0.01860 | 0.00100 | **0.02896** | 0.32940 | 0.12960 | **0.42798** | 2.50740 | 0.60000 | **2.19711** |
| | A2->Y (RF) | (B1 * !B2) | 0.01860 | 0.00100 | **0.02941** | 0.32940 | 0.12960 | **0.38993** | 2.50740 | 0.60000 | **1.92659** |
| | A2->Y (RF) | (!B1 * B2) | 0.01860 | 0.00100 | **0.02841** | 0.32940 | 0.12960 | **0.38772** | 2.50740 | 0.60000 | **1.92443** |
| | A2->Y (RF) | (!B1 * !B2) | 0.01860 | 0.00100 | **0.02965** | 0.32940 | 0.12960 | **0.38976** | 2.50740 | 0.60000 | **1.92826** |
| | B1->Y (RF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02602** | 0.32940 | 0.12960 | **0.42191** | 2.50740 | 0.60000 | **2.18541** |
| | B1->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.02528** | 0.32940 | 0.12960 | **0.41965** | 2.50740 | 0.60000 | **2.18408** |
| | B1->Y (RF) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.02497** | 0.32940 | 0.12960 | **0.41954** | 2.50740 | 0.60000 | **2.18568** |
| | B2->Y (RF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02694** | 0.32940 | 0.12960 | **0.38399** | 2.50740 | 0.60000 | **1.91667** |
| | B2->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.02624** | 0.32940 | 0.12960 | **0.38173** | 2.50740 | 0.60000 | **1.91481** |
| | B2->Y (RF) | (!A1 * !A2) | 0.01860 | 0.00100 | **0.02597** | 0.32940 | 0.12960 | **0.38161** | 2.50740 | 0.60000 | **1.91699** |
| | C1->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01455** | 0.32940 | 0.12960 | **0.29600** | 2.50740 | 0.60000 | **1.58859** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1 | 0.01860 | 0.00100 | **0.01581** | 0.32940 | 0.12960 | **0.01701** | 2.50740 | 0.60000 | **0.04036** |
| | A2 | 0.01860 | 0.00100 | **0.01607** | 0.32940 | 0.12960 | **0.01704** | 2.50740 | 0.60000 | **0.04115** |
| | B1 | 0.01860 | 0.00100 | **0.01192** | 0.32940 | 0.12960 | **0.01335** | 2.50740 | 0.60000 | **0.03378** |
| | B2 | 0.01860 | 0.00100 | **0.01212** | 0.32940 | 0.12960 | **0.01294** | 2.50740 | 0.60000 | **0.03601** |
| | C1 | 0.01860 | 0.00100 | **0.00628** | 0.32940 | 0.12960 | **0.00874** | 2.50740 | 0.60000 | **0.03401** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1 | 0.01860 | 0.00100 | **0.00908** | 0.32940 | 0.12960 | **0.01012** | 2.50740 | 0.60000 | **0.02964** |
| | A2 | 0.01860 | 0.00100 | **0.01242** | 0.32940 | 0.12960 | **0.01333** | 2.50740 | 0.60000 | **0.03503** |
| | B1 | 0.01860 | 0.00100 | **0.00580** | 0.32940 | 0.12960 | **0.00726** | 2.50740 | 0.60000 | **0.02769** |
| | B2 | 0.01860 | 0.00100 | **0.00927** | 0.32940 | 0.12960 | **0.01062** | 2.50740 | 0.60000 | **0.03178** |
| | C1 | 0.01860 | 0.00100 | **0.00821** | 0.32940 | 0.12960 | **0.01063** | 2.50740 | 0.60000 | **0.03299** |

**Internal switching power(pJ) to Y rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1 | (B1 * !B2) | 0.01860 | 0.00100 | **0.01581** | 0.32940 | 0.12960 | **0.01701** | 2.50740 | 0.60000 | **0.04036** |
| | A1 | (!B1 * B2) | 0.01860 | 0.00100 | **0.01524** | 0.32940 | 0.12960 | **0.01629** | 2.50740 | 0.60000 | **0.04029** |
| | A1 | (!B1 * !B2) | 0.01860 | 0.00100 | **0.01920** | 0.32940 | 0.12960 | **0.02014** | 2.50740 | 0.60000 | **0.04407** |
| | A2 | (B1 * !B2) | 0.01860 | 0.00100 | **0.01607** | 0.32940 | 0.12960 | **0.01704** | 2.50740 | 0.60000 | **0.04115** |
| | A2 | (!B1 * B2) | 0.01860 | 0.00100 | **0.01560** | 0.32940 | 0.12960 | **0.01633** | 2.50740 | 0.60000 | **0.04172** |
| | A2 | (!B1 * !B2) | 0.01860 | 0.00100 | **0.01958** | 0.32940 | 0.12960 | **0.02017** | 2.50740 | 0.60000 | **0.04519** |
| | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01192** | 0.32940 | 0.12960 | **0.01335** | 2.50740 | 0.60000 | **0.03378** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.01134** | 0.32940 | 0.12960 | **0.01256** | 2.50740 | 0.60000 | **0.03322** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01135** | 0.32940 | 0.12960 | **0.01293** | 2.50740 | 0.60000 | **0.03595** |
| | B2 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01212** | 0.32940 | 0.12960 | **0.01294** | 2.50740 | 0.60000 | **0.03601** |
| | B2 | (!A1 * A2) | 0.01860 | 0.00100 | **0.01164** | 0.32940 | 0.12960 | **0.01285** | 2.50740 | 0.60000 | **0.03478** |
| | B2 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.01167** | 0.32940 | 0.12960 | **0.01272** | 2.50740 | 0.60000 | **0.03659** |
| | C1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00628** | 0.32940 | 0.12960 | **0.00874** | 2.50740 | 0.60000 | **0.03401** |

**Internal switching power(pJ) to Y falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a221oi_1 | A1 | (B1 * !B2) | 0.01860 | 0.00100 | **0.01251** | 0.32940 | 0.12960 | **0.01352** | 2.50740 | 0.60000 | **0.03336** |
| | A1 | (!B1 * B2) | 0.01860 | 0.00100 | **0.00908** | 0.32940 | 0.12960 | **0.01012** | 2.50740 | 0.60000 | **0.02964** |
| | A1 | (!B1 * !B2) | 0.01860 | 0.00100 | **0.00732** | 0.32940 | 0.12960 | **0.00847** | 2.50740 | 0.60000 | **0.02939** |
| | A2 | (B1 * !B2) | 0.01860 | 0.00100 | **0.01587** | 0.32940 | 0.12960 | **0.01674** | 2.50740 | 0.60000 | **0.03742** |
| | A2 | (!B1 * B2) | 0.01860 | 0.00100 | **0.01242** | 0.32940 | 0.12960 | **0.01333** | 2.50740 | 0.60000 | **0.03503** |
| | A2 | (!B1 * !B2) | 0.01860 | 0.00100 | **0.01074** | 0.32940 | 0.12960 | **0.01164** | 2.50740 | 0.60000 | **0.03372** |
| | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00943** | 0.32940 | 0.12960 | **0.01078** | 2.50740 | 0.60000 | **0.02938** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00599** | 0.32940 | 0.12960 | **0.00739** | 2.50740 | 0.60000 | **0.02608** |
| | B1 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00580** | 0.32940 | 0.12960 | **0.00726** | 2.50740 | 0.60000 | **0.02769** |
| | B2 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01289** | 0.32940 | 0.12960 | **0.01409** | 2.50740 | 0.60000 | **0.03333** |
| | B2 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00946** | 0.32940 | 0.12960 | **0.01069** | 2.50740 | 0.60000 | **0.03042** |
| | B2 | (!A1 * !A2) | 0.01860 | 0.00100 | **0.00927** | 0.32940 | 0.12960 | **0.01062** | 2.50740 | 0.60000 | **0.03178** |
| | C1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00821** | 0.32940 | 0.12960 | **0.01063** | 2.50740 | 0.60000 | **0.03299** |

**Passive power(pJ) for A1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
|           | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
|           | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|-----------|------|-----------|-----|-----------|-----|-----------|-----|
|           |      | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | **(B1 * B2 * !C1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|-----------|------|-----------|-----|-----------|-----|-----------|-----|
|           |      | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | **(B1 * B2 * !C1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
|           | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 falling :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
|           | Slew(ns)  | Min | Slew(ns)  | Mid | Slew(ns)  | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a221oi_1 | C1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (A1 * A2 * !C1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a221oi_1 | C1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (A1 * A2 * !C1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B2 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a221oi_1 | C1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (A1 * A2 * !C1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B2 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a221oi_1 | C1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (A1 * A2 * !C1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C1 rising :**

| Cell Name | Power(pJ) | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **-0.00101** | 0.32940 | **-0.00103** | 2.50740 | **-0.00105** |

**Passive power(pJ) for C1 falling :**

| Cell Name | Power(pJ) | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | 0.01860 | **0.00101** | 0.32940 | **0.00103** | 2.50740 | **0.00105** |

**Passive power(pJ) for C1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | **(B1 * B2)** | 0.01860 | **-0.00101** | 0.32940 | **-0.00103** | 2.50740 | **-0.00105** |

**Passive power(pJ) for C1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a221oi_1** | **(B1 * B2)** | 0.01860 | **0.00101** | 0.32940 | **0.00103** | 2.50740 | **0.00105** |

# A22OI

## Truth Table

| INPUT | | | | OUTPUT |
|---|---|---|---|---|
| A1 | A2 | B1 | B2 | Y |
| 0 | x | 0 | x | 1 |
| 0 | x | 1 | 0 | 1 |
| x | x | 1 | 1 | 0 |
| 1 | 0 | 0 | x | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | x | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_a22oi_1 | 10.84860 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|---|---|---|---|---|---|
| | A1 | A2 | B1 | B2 | Y |
| sg13g2_a22oi_1 | 0.00300 | 0.00342 | 0.00388 | 0.00389 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_a22oi_1 | 406.81900 | 1461.89000 | 2677.82000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a22oi_1 | **A1->Y (FR)** | 0.01860 | 0.00100 | **0.02434** | 0.32940 | 0.06480 | **0.24341** | 2.50740 | 0.30000 | **1.25547** |
| | **A2->Y (FR)** | 0.01860 | 0.00100 | **0.02748** | 0.32940 | 0.06480 | **0.24693** | 2.50740 | 0.30000 | **1.26593** |
| | **B1->Y (FR)** | 0.01860 | 0.00100 | **0.02065** | 0.32940 | 0.06480 | **0.25723** | 2.50740 | 0.30000 | **1.37317** |
| | **B2->Y (FR)** | 0.01860 | 0.00100 | **0.01739** | 0.32940 | 0.06480 | **0.25328** | 2.50740 | 0.30000 | **1.36247** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a22oi_1 | **A1->Y (RF)** | 0.01860 | 0.00100 | **0.02765** | 0.32940 | 0.06480 | **0.27396** | 2.50740 | 0.30000 | **1.40737** |
| | **A2->Y (RF)** | 0.01860 | 0.00100 | **0.02851** | 0.32940 | 0.06480 | **0.24219** | 2.50740 | 0.30000 | **1.20803** |
| | **B1->Y (RF)** | 0.01860 | 0.00100 | **0.01994** | 0.32940 | 0.06480 | **0.23220** | 2.50740 | 0.30000 | **1.19244** |
| | **B2->Y (RF)** | 0.01860 | 0.00100 | **0.01854** | 0.32940 | 0.06480 | **0.26272** | 2.50740 | 0.30000 | **1.39088** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a22oi_1 | A1 | 0.01860 | 0.00100 | **0.00575** | 0.32940 | 0.06480 | **0.00872** | 2.50740 | 0.30000 | **0.04709** |
| | A2 | 0.01860 | 0.00100 | **0.00758** | 0.32940 | 0.06480 | **0.01040** | 2.50740 | 0.30000 | **0.05180** |
| | B1 | 0.01860 | 0.00100 | **0.00280** | 0.32940 | 0.06480 | **0.00713** | 2.50740 | 0.30000 | **0.05035** |
| | B2 | 0.01860 | 0.00100 | **0.00254** | 0.32940 | 0.06480 | **0.00698** | 2.50740 | 0.30000 | **0.04760** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a22oi_1 | A1 | 0.01860 | 0.00100 | **0.00278** | 0.32940 | 0.06480 | **0.00659** | 2.50740 | 0.30000 | **0.04384** |
| | A2 | 0.01860 | 0.00100 | **0.00518** | 0.32940 | 0.06480 | **0.00862** | 2.50740 | 0.30000 | **0.04725** |
| | B1 | 0.01860 | 0.00100 | **-0.00280** | 0.32940 | 0.06480 | **-0.00129** | 2.50740 | 0.30000 | **0.03527** |
| | B2 | 0.01860 | 0.00100 | **-0.00254** | 0.32940 | 0.06480 | **-0.00116** | 2.50740 | 0.30000 | **0.03425** |

**Passive power(pJ) for A1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a22oi_1** | 0.01860 | **0.00365** | 0.32940 | **0.00315** | 2.50740 | **0.00303** |

**Passive power(pJ) for A1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a22oi_1** | 0.01860 | **0.00739** | 0.32940 | **0.00737** | 2.50740 | **0.00737** |

**Passive power(pJ) for A2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a22oi_1** | 0.01860 | **0.00461** | 0.32940 | **0.00410** | 2.50740 | **0.00399** |

**Passive power(pJ) for A2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a22oi_1 | 0.01860 | **0.00588** | 0.32940 | **0.00589** | 2.50740 | **0.00589** |

**Passive power(pJ) for B1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a22oi_1 | 0.01860 | **0.01238** | 0.32940 | **0.01282** | 2.50740 | **0.01322** |

**Passive power(pJ) for B1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a22oi_1 | 0.01860 | **0.00227** | 0.32940 | **0.00231** | 2.50740 | **0.00232** |

**Passive power(pJ) for B2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a22oi_1 | 0.01860 | **0.00919** | 0.32940 | **0.00965** | 2.50740 | **0.01004** |

**Passive power(pJ) for B2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a22oi_1 | 0.01860 | **0.00218** | 0.32940 | **0.00223** | 2.50740 | **0.00224** |

# AND2x

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| **A** | **B** | **X** |
| **0** | **x** | **0** |
| **1** | **0** | **0** |
| **1** | **1** | **1** |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_and2_2** | 10.88640 |
| **sg13g2_and2_1** | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | **A** | **B** | **X** |
| **sg13g2_and2_2** | 0.00284 | 0.00289 | 0.60000 |
| **sg13g2_and2_1** | 0.00287 | 0.00291 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_and2_2 | 1611.43000 | 1783.93000 | 2156.78000 |
| sg13g2_and2_1 | 881.88800 | 1184.62000 | 1427.23000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max | |
| **sg13g2_and2_2** | **A->X (RR)** | 0.01860 | 0.00100 | **0.04251** | 0.32940 | 0.12960 | **0.19679** | 2.50740 | 0.60000 | **0.68846** | |
| | **B->X (RR)** | 0.01860 | 0.00100 | **0.04343** | 0.32940 | 0.12960 | **0.18504** | 2.50740 | 0.60000 | **0.62682** | |
| **sg13g2_and2_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.03420** | 0.32940 | 0.06480 | **0.17189** | 2.50740 | 0.30000 | **0.64020** | |
| | **B->X (RR)** | 0.01860 | 0.00100 | **0.03536** | 0.32940 | 0.06480 | **0.16336** | 2.50740 | 0.30000 | **0.58527** | |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max | |
| **sg13g2_and2_2** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03571** | 0.32940 | 0.12960 | **0.16963** | 2.50740 | 0.60000 | **0.56255** | |
| | **B->X (FF)** | 0.01860 | 0.00100 | **0.03823** | 0.32940 | 0.12960 | **0.17913** | 2.50740 | 0.60000 | **0.61309** | |
| **sg13g2_and2_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.02923** | 0.32940 | 0.06480 | **0.14670** | 2.50740 | 0.30000 | **0.51296** | |
| | **B->X (FF)** | 0.01860 | 0.00100 | **0.03199** | 0.32940 | 0.06480 | **0.15651** | 2.50740 | 0.30000 | **0.56719** | |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and2_2 | A | 0.01860 | 0.00100 | **0.02222** | 0.32940 | 0.12960 | **0.02980** | 2.50740 | 0.60000 | **0.10849** |
| | B | 0.01860 | 0.00100 | **0.02510** | 0.32940 | 0.12960 | **0.03140** | 2.50740 | 0.60000 | **0.11067** |
| sg13g2_and2_1 | A | 0.01860 | 0.00100 | **0.01267** | 0.32940 | 0.06480 | **0.02179** | 2.50740 | 0.30000 | **0.10105** |
| | B | 0.01860 | 0.00100 | **0.01558** | 0.32940 | 0.06480 | **0.02349** | 2.50740 | 0.30000 | **0.10436** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and2_2 | A | 0.01860 | 0.00100 | **0.01952** | 0.32940 | 0.12960 | **0.02813** | 2.50740 | 0.60000 | **0.10416** |
| | B | 0.01860 | 0.00100 | **0.01980** | 0.32940 | 0.12960 | **0.02885** | 2.50740 | 0.60000 | **0.10727** |
| sg13g2_and2_1 | A | 0.01860 | 0.00100 | **0.01102** | 0.32940 | 0.06480 | **0.02054** | 2.50740 | 0.30000 | **0.09724** |
| | B | 0.01860 | 0.00100 | **0.01123** | 0.32940 | 0.06480 | **0.02101** | 2.50740 | 0.30000 | **0.09981** |

# AND3x

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A | B | C | X |
| 0 | x | x | 0 |
| 1 | 0 | x | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_and3_2 | 12.70080 |
| sg13g2_and3_1 | 12.70080 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A | B | C | X |
| sg13g2_and3_2 | 0.00262 | 0.00283 | 0.00288 | 0.60000 |
| sg13g2_and3_1 | 0.00264 | 0.00285 | 0.00287 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_and3_2 | 1615.46000 | 2042.82000 | 2698.25000 |
| sg13g2_and3_1 | 885.91900 | 1378.40000 | 2021.60000 |

# Delay Information
**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_and3_2** | **A->X (RR)** | 0.01860 | 0.00100 | **0.05618** | 0.32940 | 0.12960 | **0.22605** | 2.50740 | 0.60000 | **0.78371** |
| | **B->X (RR)** | 0.01860 | 0.00100 | **0.05998** | 0.32940 | 0.12960 | **0.21847** | 2.50740 | 0.60000 | **0.74151** |
| | **C->X (RR)** | 0.01860 | 0.00100 | **0.06129** | 0.32940 | 0.12960 | **0.20414** | 2.50740 | 0.60000 | **0.67080** |
| **sg13g2_and3_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.04435** | 0.32940 | 0.06480 | **0.19615** | 2.50740 | 0.30000 | **0.72732** |
| | **B->X (RR)** | 0.01860 | 0.00100 | **0.04828** | 0.32940 | 0.06480 | **0.19124** | 2.50740 | 0.30000 | **0.69094** |
| | **C->X (RR)** | 0.01860 | 0.00100 | **0.04962** | 0.32940 | 0.06480 | **0.17951** | 2.50740 | 0.30000 | **0.62882** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_and3_2** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03733** | 0.32940 | 0.12960 | **0.17156** | 2.50740 | 0.60000 | **0.52845** |
| | **B->X (FF)** | 0.01860 | 0.00100 | **0.03999** | 0.32940 | 0.12960 | **0.18023** | 2.50740 | 0.60000 | **0.57033** |
| | **C->X (FF)** | 0.01860 | 0.00100 | **0.04174** | 0.32940 | 0.12960 | **0.18765** | 2.50740 | 0.60000 | **0.62015** |
| **sg13g2_and3_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03102** | 0.32940 | 0.06480 | **0.14780** | 2.50740 | 0.30000 | **0.47573** |
| | **B->X (FF)** | 0.01860 | 0.00100 | **0.03389** | 0.32940 | 0.06480 | **0.15766** | 2.50740 | 0.30000 | **0.52258** |
| | **C->X (FF)** | 0.01860 | 0.00100 | **0.03556** | 0.32940 | 0.06480 | **0.16631** | 2.50740 | 0.30000 | **0.57508** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and3_2 | A | 0.01860 | 0.00100 | **0.02709** | 0.32940 | 0.12960 | **0.03181** | 2.50740 | 0.60000 | **0.10307** |
| | B | 0.01860 | 0.00100 | **0.02894** | 0.32940 | 0.12960 | **0.03255** | 2.50740 | 0.60000 | **0.10485** |
| | C | 0.01860 | 0.00100 | **0.03178** | 0.32940 | 0.12960 | **0.03453** | 2.50740 | 0.60000 | **0.11165** |
| sg13g2_and3_1 | A | 0.01860 | 0.00100 | **0.01578** | 0.32940 | 0.06480 | **0.02336** | 2.50740 | 0.30000 | **0.09505** |
| | B | 0.01860 | 0.00100 | **0.01758** | 0.32940 | 0.06480 | **0.02388** | 2.50740 | 0.30000 | **0.09726** |
| | C | 0.01860 | 0.00100 | **0.02034** | 0.32940 | 0.06480 | **0.02607** | 2.50740 | 0.30000 | **0.10490** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and3_2 | A | 0.01860 | 0.00100 | **0.01875** | 0.32940 | 0.12960 | **0.02633** | 2.50740 | 0.60000 | **0.09586** |
| | B | 0.01860 | 0.00100 | **0.02035** | 0.32940 | 0.12960 | **0.02799** | 2.50740 | 0.60000 | **0.09846** |
| | C | 0.01860 | 0.00100 | **0.02065** | 0.32940 | 0.12960 | **0.02867** | 2.50740 | 0.60000 | **0.10527** |
| sg13g2_and3_1 | A | 0.01860 | 0.00100 | **0.01016** | 0.32940 | 0.06480 | **0.01824** | 2.50740 | 0.30000 | **0.08762** |
| | B | 0.01860 | 0.00100 | **0.01165** | 0.32940 | 0.06480 | **0.01997** | 2.50740 | 0.30000 | **0.09091** |
| | C | 0.01860 | 0.00100 | **0.01188** | 0.32940 | 0.06480 | **0.02074** | 2.50740 | 0.30000 | **0.09742** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_and3_2** | 0.01860 | **-0.00109** | 0.32940 | **-0.00113** | 2.50740 | **-0.00120** |
| **sg13g2_and3_1** | 0.01860 | **-0.00109** | 0.32940 | **-0.00113** | 2.50740 | **-0.00120** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_and3_2** | 0.01860 | **0.00109** | 0.32940 | **0.00113** | 2.50740 | **0.00120** |
| **sg13g2_and3_1** | 0.01860 | **0.00109** | 0.32940 | **0.00113** | 2.50740 | **0.00120** |

# AND4x

## Truth Table

| INPUT | | | | OUTPUT |
|---|---|---|---|---|
| A | B | C | D | X |
| 0 | x | x | x | 0 |
| 1 | 0 | x | x | 0 |
| 1 | 1 | 0 | x | 0 |
| 1 | 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_and4_2 | 16.32960 |
| sg13g2_and4_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|---|---|---|---|---|---|
| | A | B | C | D | X |
| sg13g2_and4_2 | 0.00250 | 0.00252 | 0.00295 | 0.00291 | 0.60000 |
| sg13g2_and4_1 | 0.00252 | 0.00253 | 0.00296 | 0.00292 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_and4_2 | 1619.64000 | 2202.61000 | 3239.66000 |
| sg13g2_and4_1 | 890.08400 | 1505.62000 | 2625.89000 |

# Delay Information
**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and4_2 | A->X (RR) | 0.01860 | 0.00100 | **0.07024** | 0.32940 | 0.12960 | **0.25254** | 2.50740 | 0.60000 | **0.86153** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.07645** | 0.32940 | 0.12960 | **0.24737** | 2.50740 | 0.60000 | **0.83045** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.07999** | 0.32940 | 0.12960 | **0.23642** | 2.50740 | 0.60000 | **0.77687** |
| | D->X (RR) | 0.01860 | 0.00100 | **0.08162** | 0.32940 | 0.12960 | **0.22461** | 2.50740 | 0.60000 | **0.70758** |
| sg13g2_and4_1 | A->X (RR) | 0.01860 | 0.00100 | **0.05510** | 0.32940 | 0.06480 | **0.21932** | 2.50740 | 0.30000 | **0.80649** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.06131** | 0.32940 | 0.06480 | **0.21674** | 2.50740 | 0.30000 | **0.77835** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.06489** | 0.32940 | 0.06480 | **0.20811** | 2.50740 | 0.30000 | **0.73065** |
| | D->X (RR) | 0.01860 | 0.00100 | **0.06654** | 0.32940 | 0.06480 | **0.19792** | 2.50740 | 0.30000 | **0.66793** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and4_2 | A->X (FF) | 0.01860 | 0.00100 | **0.03847** | 0.32940 | 0.12960 | **0.17249** | 2.50740 | 0.60000 | **0.49853** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.04117** | 0.32940 | 0.12960 | **0.18037** | 2.50740 | 0.60000 | **0.53494** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.04311** | 0.32940 | 0.12960 | **0.18726** | 2.50740 | 0.60000 | **0.57614** |
| | D->X (FF) | 0.01860 | 0.00100 | **0.04454** | 0.32940 | 0.12960 | **0.19334** | 2.50740 | 0.60000 | **0.62322** |
| sg13g2_and4_1 | A->X (FF) | 0.01860 | 0.00100 | **0.03254** | 0.32940 | 0.06480 | **0.14893** | 2.50740 | 0.30000 | **0.44554** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.03540** | 0.32940 | 0.06480 | **0.15807** | 2.50740 | 0.30000 | **0.48404** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.03731** | 0.32940 | 0.06480 | **0.16574** | 2.50740 | 0.30000 | **0.53004** |
| | D->X (FF) | 0.01860 | 0.00100 | **0.03857** | 0.32940 | 0.06480 | **0.17297** | 2.50740 | 0.30000 | **0.58161** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and4_2 | A | 0.01860 | 0.00100 | **0.03051** | 0.32940 | 0.12960 | **0.03233** | 2.50740 | 0.60000 | **0.09736** |
| | B | 0.01860 | 0.00100 | **0.03346** | 0.32940 | 0.12960 | **0.03411** | 2.50740 | 0.60000 | **0.10029** |
| | C | 0.01860 | 0.00100 | **0.03561** | 0.32940 | 0.12960 | **0.03551** | 2.50740 | 0.60000 | **0.10624** |
| | D | 0.01860 | 0.00100 | **0.03715** | 0.32940 | 0.12960 | **0.03660** | 2.50740 | 0.60000 | **0.11135** |
| sg13g2_and4_1 | A | 0.01860 | 0.00100 | **0.01733** | 0.32940 | 0.06480 | **0.02358** | 2.50740 | 0.30000 | **0.08987** |
| | B | 0.01860 | 0.00100 | **0.02037** | 0.32940 | 0.06480 | **0.02535** | 2.50740 | 0.30000 | **0.09217** |
| | C | 0.01860 | 0.00100 | **0.02246** | 0.32940 | 0.06480 | **0.02676** | 2.50740 | 0.30000 | **0.09837** |
| | D | 0.01860 | 0.00100 | **0.02415** | 0.32940 | 0.06480 | **0.02790** | 2.50740 | 0.30000 | **0.10422** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_and4_2 | A | 0.01860 | 0.00100 | **0.01949** | 0.32940 | 0.12960 | **0.02640** | 2.50740 | 0.60000 | **0.09082** |
| | B | 0.01860 | 0.00100 | **0.02013** | 0.32940 | 0.12960 | **0.02678** | 2.50740 | 0.60000 | **0.09264** |
| | C | 0.01860 | 0.00100 | **0.02125** | 0.32940 | 0.12960 | **0.02807** | 2.50740 | 0.60000 | **0.09812** |
| | D | 0.01860 | 0.00100 | **0.02143** | 0.32940 | 0.12960 | **0.02846** | 2.50740 | 0.60000 | **0.10433** |
| sg13g2_and4_1 | A | 0.01860 | 0.00100 | **0.01090** | 0.32940 | 0.06480 | **0.01830** | 2.50740 | 0.30000 | **0.08295** |
| | B | 0.01860 | 0.00100 | **0.01143** | 0.32940 | 0.06480 | **0.01878** | 2.50740 | 0.30000 | **0.08424** |
| | C | 0.01860 | 0.00100 | **0.01242** | 0.32940 | 0.06480 | **0.02001** | 2.50740 | 0.30000 | **0.09016** |
| | D | 0.01860 | 0.00100 | **0.01242** | 0.32940 | 0.06480 | **0.02058** | 2.50740 | 0.30000 | **0.09662** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_and4_2** | 0.01860 | **-0.00082** | 0.32940 | **-0.00080** | 2.50740 | **-0.00079** |
| **sg13g2_and4_1** | 0.01860 | **-0.00081** | 0.32940 | **-0.00080** | 2.50740 | **-0.00080** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00120** | 0.32940 | **0.00120** | 2.50740 | **0.00120** |
| sg13g2_and4_1 | 0.01860 | **0.00120** | 0.32940 | **0.00120** | 2.50740 | **0.00120** |

**Passive power(pJ) for A rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (B * C * !D) + (B * !C) | 0.01860 | **-0.00082** | 0.32940 | **-0.00080** | 2.50740 | **-0.00079** |
| sg13g2_and4_1 | (B * C * !D) + (B * !C) | 0.01860 | **-0.00081** | 0.32940 | **-0.00080** | 2.50740 | **-0.00080** |

**Passive power(pJ) for A falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (B * C * !D) + (B * !C) | 0.01860 | **0.00120** | 0.32940 | **0.00120** | 2.50740 | **0.00120** |
| sg13g2_and4_1 | (B * C * !D) + (B * !C) | 0.01860 | **0.00120** | 0.32940 | **0.00120** | 2.50740 | **0.00120** |

**Passive power(pJ) for B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **-0.00068** | 0.32940 | **-0.00068** | 2.50740 | **-0.00068** |
| sg13g2_and4_1 | 0.01860 | **-0.00068** | 0.32940 | **-0.00068** | 2.50740 | **-0.00068** |

**Passive power(pJ) for B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00077** | 0.32940 | **0.00078** | 2.50740 | **0.00079** |
| sg13g2_and4_1 | 0.01860 | **0.00078** | 0.32940 | **0.00078** | 2.50740 | **0.00079** |

**Passive power(pJ) for B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * C * !D) + (A * !C) | 0.01860 | **-0.00068** | 0.32940 | **-0.00068** | 2.50740 | **-0.00068** |
| sg13g2_and4_1 | (A * C * !D) + (A * !C) | 0.01860 | **-0.00068** | 0.32940 | **-0.00068** | 2.50740 | **-0.00068** |

**Passive power(pJ) for B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * C * !D) + (A * !C) | 0.01860 | **0.00077** | 0.32940 | **0.00078** | 2.50740 | **0.00079** |
| sg13g2_and4_1 | (A * C * !D) + (A * !C) | 0.01860 | **0.00078** | 0.32940 | **0.00078** | 2.50740 | **0.00079** |

**Passive power(pJ) for C rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_and4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_and4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * !B * D) + (!A * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_and4_1 | (A * !B * D) + (!A * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * !B * D) + (!A * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_and4_1 | (A * !B * D) + (!A * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00100** | 0.32940 | **0.00096** | 2.50740 | **0.00099** |
| sg13g2_and4_1 | 0.01860 | **0.00100** | 0.32940 | **0.00096** | 2.50740 | **0.00099** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | 0.01860 | **0.00034** | 0.32940 | **0.00013** | 2.50740 | **0.00006** |
| sg13g2_and4_1 | 0.01860 | **0.00034** | 0.32940 | **0.00013** | 2.50740 | **0.00006** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * !B * C) + (!A * C) | 0.01860 | **0.00100** | 0.32940 | **0.00096** | 2.50740 | **0.00099** |
| sg13g2_and4_1 | (A * !B * C) + (!A * C) | 0.01860 | **0.00100** | 0.32940 | **0.00096** | 2.50740 | **0.00099** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_and4_2 | (A * !B * C) + (!A * C) | 0.01860 | **0.00034** | 0.32940 | **0.00013** | 2.50740 | **0.00006** |
| sg13g2_and4_1 | (A * !B * C) + (!A * C) | 0.01860 | **0.00034** | 0.32940 | **0.00013** | 2.50740 | **0.00006** |

# AO21x

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A1 | A2 | B1 | X |
| 0 | x | 0 | 0 |
| x | x | 1 | 1 |
| 1 | 0 | 0 | 0 |
| 1 | 1 | x | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_a21o_2 | 14.51520 |
| sg13g2_a21o_1 | 12.70080 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A1 | A2 | B1 | X |
| sg13g2_a21o_2 | 0.00336 | 0.00334 | 0.00291 | 0.60000 |
| sg13g2_a21o_1 | 0.00315 | 0.00322 | 0.00276 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_a21o_2 | 1463.02000 | 1989.28000 | 2488.15000 |
| sg13g2_a21o_1 | 1094.65000 | 1428.47000 | 1866.63000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | A1->X (RR) | 0.01860 | 0.00100 | **0.04521** | 0.32940 | 0.12960 | **0.19969** | 2.50740 | 0.60000 | **0.67268** |
| | A2->X (RR) | 0.01860 | 0.00100 | **0.04583** | 0.32940 | 0.12960 | **0.18679** | 2.50740 | 0.60000 | **0.60933** |
| | B1->X (RR) | 0.01860 | 0.00100 | **0.03052** | 0.32940 | 0.12960 | **0.16657** | 2.50740 | 0.60000 | **0.51581** |
| sg13g2_a21o_1 | A1->X (RR) | 0.01860 | 0.00100 | **0.04191** | 0.32940 | 0.06480 | **0.18956** | 2.50740 | 0.30000 | **0.68370** |
| | A2->X (RR) | 0.01860 | 0.00100 | **0.04269** | 0.32940 | 0.06480 | **0.17819** | 2.50740 | 0.30000 | **0.62432** |
| | B1->X (RR) | 0.01860 | 0.00100 | **0.02823** | 0.32940 | 0.06480 | **0.15676** | 2.50740 | 0.30000 | **0.52141** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | A1->X (FF) | 0.01860 | 0.00100 | **0.05463** | 0.32940 | 0.12960 | **0.18713** | 2.50740 | 0.60000 | **0.61401** |
| | A2->X (FF) | 0.01860 | 0.00100 | **0.05959** | 0.32940 | 0.12960 | **0.19732** | 2.50740 | 0.60000 | **0.66605** |
| | B1->X (FF) | 0.01860 | 0.00100 | **0.05567** | 0.32940 | 0.12960 | **0.21410** | 2.50740 | 0.60000 | **0.76100** |
| sg13g2_a21o_1 | A1->X (FF) | 0.01860 | 0.00100 | **0.04335** | 0.32940 | 0.06480 | **0.15977** | 2.50740 | 0.30000 | **0.53071** |
| | A2->X (FF) | 0.01860 | 0.00100 | **0.04797** | 0.32940 | 0.06480 | **0.16971** | 2.50740 | 0.30000 | **0.58507** |
| | B1->X (FF) | 0.01860 | 0.00100 | **0.04378** | 0.32940 | 0.06480 | **0.18182** | 2.50740 | 0.30000 | **0.66948** |

**Delay(ns) to X rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | B1->X (RR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.03052** | 0.32940 | 0.12960 | **0.16657** | 2.50740 | 0.60000 | **0.51581** |
| | B1->X (RR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.02924** | 0.32940 | 0.12960 | **0.15902** | 2.50740 | 0.60000 | **0.49601** |
| sg13g2_a21o_1 | B1->X (RR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02823** | 0.32940 | 0.06480 | **0.15676** | 2.50740 | 0.30000 | **0.52141** |
| | B1->X (RR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.02666** | 0.32940 | 0.06480 | **0.14851** | 2.50740 | 0.30000 | **0.50084** |

**Delay(ns) to X falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | B1->X (FF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.05567** | 0.32940 | 0.12960 | **0.21410** | 2.50740 | 0.60000 | **0.76100** |
| | B1->X (FF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.04976** | 0.32940 | 0.12960 | **0.20326** | 2.50740 | 0.60000 | **0.74106** |
| sg13g2_a21o_1 | B1->X (FF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.04378** | 0.32940 | 0.06480 | **0.18182** | 2.50740 | 0.30000 | **0.66948** |
| | B1->X (FF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.03853** | 0.32940 | 0.06480 | **0.17124** | 2.50740 | 0.30000 | **0.64927** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | A1 | 0.01860 | 0.00100 | **0.02378** | 0.32940 | 0.12960 | **0.03142** | 2.50740 | 0.60000 | **0.11513** |
| | A2 | 0.01860 | 0.00100 | **0.02705** | 0.32940 | 0.12960 | **0.03355** | 2.50740 | 0.60000 | **0.11872** |
| | B1 | 0.01860 | 0.00100 | **0.02101** | 0.32940 | 0.12960 | **0.03054** | 2.50740 | 0.60000 | **0.11716** |
| sg13g2_a21o_1 | A1 | 0.01860 | 0.00100 | **0.01415** | 0.32940 | 0.06480 | **0.02221** | 2.50740 | 0.30000 | **0.09988** |
| | A2 | 0.01860 | 0.00100 | **0.01716** | 0.32940 | 0.06480 | **0.02428** | 2.50740 | 0.30000 | **0.10452** |
| | B1 | 0.01860 | 0.00100 | **0.01275** | 0.32940 | 0.06480 | **0.02211** | 2.50740 | 0.30000 | **0.10452** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | A1 | 0.01860 | 0.00100 | **0.02717** | 0.32940 | 0.12960 | **0.03219** | 2.50740 | 0.60000 | **0.11487** |
| | A2 | 0.01860 | 0.00100 | **0.02781** | 0.32940 | 0.12960 | **0.03259** | 2.50740 | 0.60000 | **0.11873** |
| | B1 | 0.01860 | 0.00100 | **0.02250** | 0.32940 | 0.12960 | **0.03052** | 2.50740 | 0.60000 | **0.11747** |
| sg13g2_a21o_1 | A1 | 0.01860 | 0.00100 | **0.01651** | 0.32940 | 0.06480 | **0.02357** | 2.50740 | 0.30000 | **0.10046** |
| | A2 | 0.01860 | 0.00100 | **0.01668** | 0.32940 | 0.06480 | **0.02367** | 2.50740 | 0.30000 | **0.10329** |
| | B1 | 0.01860 | 0.00100 | **0.01170** | 0.32940 | 0.06480 | **0.02157** | 2.50740 | 0.30000 | **0.10142** |

**Internal switching power(pJ) to X rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.02467** | 0.32940 | 0.12960 | **0.03446** | 2.50740 | 0.60000 | **0.12179** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.02101** | 0.32940 | 0.12960 | **0.03054** | 2.50740 | 0.60000 | **0.11716** |
| sg13g2_a21o_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01578** | 0.32940 | 0.06480 | **0.02518** | 2.50740 | 0.30000 | **0.10737** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.01275** | 0.32940 | 0.06480 | **0.02211** | 2.50740 | 0.30000 | **0.10452** |

**Internal switching power(pJ) to X falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_a21o_2 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.02341** | 0.32940 | 0.12960 | **0.03033** | 2.50740 | 0.60000 | **0.11631** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.02250** | 0.32940 | 0.12960 | **0.03052** | 2.50740 | 0.60000 | **0.11747** |
| sg13g2_a21o_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.01212** | 0.32940 | 0.06480 | **0.02129** | 2.50740 | 0.30000 | **0.10020** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.01170** | 0.32940 | 0.06480 | **0.02157** | 2.50740 | 0.30000 | **0.10142** |

**Passive power(pJ) for A1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21o_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21o_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21o_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21o_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21o_2** | **(A2 * B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A2 * B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21o_1** | **(A2 * B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | **(!A2 * B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | (A2 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A2 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_a21o_1 | (A2 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A2 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21o_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21o_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_a21o_2** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_a21o_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | (A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_a21o_1 | (A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | (A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_a21o_1 | (A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!A1 * B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | 0.01860 | **-0.00054** | 0.32940 | **-0.00057** | 2.50740 | **-0.00058** |
| sg13g2_a21o_1 | 0.01860 | **-0.00076** | 0.32940 | **-0.00079** | 2.50740 | **-0.00080** |

**Passive power(pJ) for B1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | 0.01860 | **0.00054** | 0.32940 | **0.00057** | 2.50740 | **0.00058** |
| sg13g2_a21o_1 | 0.01860 | **0.00076** | 0.32940 | **0.00079** | 2.50740 | **0.00080** |

**Passive power(pJ) for B1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | (A1 * A2) | 0.01860 | **-0.00054** | 0.32940 | **-0.00057** | 2.50740 | **-0.00058** |
| sg13g2_a21o_1 | (A1 * A2) | 0.01860 | **-0.00076** | 0.32940 | **-0.00079** | 2.50740 | **-0.00080** |

**Passive power(pJ) for B1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_a21o_2 | (A1 * A2) | 0.01860 | **0.00054** | 0.32940 | **0.00057** | 2.50740 | **0.00058** |
| sg13g2_a21o_1 | (A1 * A2) | 0.01860 | **0.00076** | 0.32940 | **0.00079** | 2.50740 | **0.00080** |

# BTLx

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | TE_B | Z |
| 0 | 0 | 0 |
| 1 | 0 | 1 |
| - | 1 | HiZ |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_ebufn_8 | 45.36000 |
| sg13g2_ebufn_4 | 25.40160 |
| sg13g2_ebufn_2 | 18.14400 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | TE_B | Z |
| sg13g2_ebufn_8 | 0.00656 | 0.01966 | 2.40000 |
| sg13g2_ebufn_4 | 0.00335 | 0.01181 | 1.20000 |
| sg13g2_ebufn_2 | 0.00298 | 0.00725 | 0.60000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_ebufn_8** | 1242.29000 | 6703.58000 | 13150.90000 |
| **sg13g2_ebufn_4** | 985.81400 | 3586.25000 | 6679.77000 |
| **sg13g2_ebufn_2** | 819.87000 | 2120.06000 | 3500.29000 |

# Delay Information

**Delay(ns) to Z rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_ebufn_8 | A->Z (RR) | 0.01860 | 0.02060 | **0.03954** | 0.32940 | 0.53800 | **0.27722** | 2.50740 | 2.41960 | **1.04438** |
| | TE_B->Z (RR) | 0.01860 | 0.02060 | **0.04150** | 0.32940 | 0.53800 | **0.10157** | 2.50740 | 2.41960 | **0.21115** |
| | TE_B->Z (FR) | 0.01860 | 0.02060 | **0.01852** | 0.32940 | 0.53800 | **0.25929** | 2.50740 | 2.41960 | **1.26059** |
| sg13g2_ebufn_4 | A->Z (RR) | 0.01860 | 0.01098 | **0.04033** | 0.32940 | 0.26918 | **0.27690** | 2.50740 | 1.20998 | **1.04121** |
| | TE_B->Z (RR) | 0.01860 | 0.01098 | **0.03173** | 0.32940 | 0.26918 | **0.07455** | 2.50740 | 1.20998 | **0.14439** |
| | TE_B->Z (FR) | 0.01860 | 0.01098 | **0.01787** | 0.32940 | 0.26918 | **0.25748** | 2.50740 | 1.20998 | **1.25724** |
| sg13g2_ebufn_2 | A->Z (RR) | 0.01860 | 0.00605 | **0.03375** | 0.32940 | 0.13465 | **0.25420** | 2.50740 | 0.60506 | **0.99644** |
| | TE_B->Z (RR) | 0.01860 | 0.00605 | **0.02702** | 0.32940 | 0.13465 | **0.06189** | 2.50740 | 0.60506 | **0.12132** |
| | TE_B->Z (FR) | 0.01860 | 0.00605 | **0.01793** | 0.32940 | 0.13465 | **0.25407** | 2.50740 | 0.60506 | **1.24397** |

**Delay(ns) to Z falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_ebufn_8 | A->Z (FF) | 0.01860 | 0.02971 | **0.04337** | 0.32940 | 0.54711 | **0.24537** | 2.50740 | 2.42871 | **0.89454** |
| | TE_B->Z (RF) | 0.01860 | 0.02971 | **0.01791** | 0.32940 | 0.54711 | **0.07587** | 2.50740 | 2.42871 | **0.48119** |
| | TE_B->Z (FF) | 0.01860 | 0.02971 | **0.04382** | 0.32940 | 0.54711 | **0.25247** | 2.50740 | 2.42871 | **0.89836** |
| sg13g2_ebufn_4 | A->Z (FF) | 0.01860 | 0.01557 | **0.04427** | 0.32940 | 0.27377 | **0.24682** | 2.50740 | 1.21457 | **0.89501** |
| | TE_B->Z (RF) | 0.01860 | 0.01557 | **0.01650** | 0.32940 | 0.27377 | **0.07416** | 2.50740 | 1.21457 | **0.47815** |
| | TE_B->Z (FF) | 0.01860 | 0.01557 | **0.03388** | 0.32940 | 0.27377 | **0.22178** | 2.50740 | 1.21457 | **0.82734** |
| sg13g2_ebufn_2 | A->Z (FF) | 0.01860 | 0.00843 | **0.03463** | 0.32940 | 0.13703 | **0.21847** | 2.50740 | 0.60743 | **0.83141** |
| | TE_B->Z (RF) | 0.01860 | 0.00843 | **0.01562** | 0.32940 | 0.13703 | **0.07368** | 2.50740 | 0.60743 | **0.47331** |
| | TE_B->Z (FF) | 0.01860 | 0.00843 | **0.02920** | 0.32940 | 0.13703 | **0.20174** | 2.50740 | 0.60743 | **0.77727** |

# Power Information

**Internal switching power(pJ) to Z rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_ebufn_8 | A | 0.01860 | 0.02060 | **0.08627** | 0.32940 | 0.53800 | **0.09127** | 2.50740 | 2.41960 | **0.10536** |
| | TE_B | 0.01860 | 0.02060 | **0.01758** | 0.32940 | 0.53800 | **0.01606** | 2.50740 | 2.41960 | **0.01604** |
| sg13g2_ebufn_4 | A | 0.01860 | 0.01098 | **0.04341** | 0.32940 | 0.26918 | **0.04524** | 2.50740 | 1.20998 | **0.04856** |
| | TE_B | 0.01860 | 0.01098 | **0.00920** | 0.32940 | 0.26918 | **0.00855** | 2.50740 | 1.20998 | **0.00899** |
| sg13g2_ebufn_2 | A | 0.01860 | 0.00605 | **0.02261** | 0.32940 | 0.13465 | **0.02294** | 2.50740 | 0.60506 | **0.02346** |
| | TE_B | 0.01860 | 0.00605 | **0.00508** | 0.32940 | 0.13465 | **0.00463** | 2.50740 | 0.60506 | **0.00457** |

**Internal switching power(pJ) to Z falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_ebufn_8 | A | 0.01860 | 0.02971 | **0.07462** | 0.32940 | 0.54711 | **0.07280** | 2.50740 | 2.42871 | **0.06624** |
| | TE_B | 0.01860 | 0.02971 | **0.01299** | 0.32940 | 0.54711 | **0.01215** | 2.50740 | 2.42871 | **0.01240** |
| sg13g2_ebufn_4 | A | 0.01860 | 0.01557 | **0.03728** | 0.32940 | 0.27377 | **0.03705** | 2.50740 | 1.21457 | **0.03522** |
| | TE_B | 0.01860 | 0.01557 | **0.00695** | 0.32940 | 0.27377 | **0.00709** | 2.50740 | 1.21457 | **0.00572** |
| sg13g2_ebufn_2 | A | 0.01860 | 0.00843 | **0.01781** | 0.32940 | 0.13703 | **0.01871** | 2.50740 | 0.60743 | **0.01693** |
| | TE_B | 0.01860 | 0.00843 | **0.00385** | 0.32940 | 0.13703 | **0.00392** | 2.50740 | 0.60743 | **0.00349** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_ebufn_8** | 0.01860 | **0.01165** | 0.32940 | **0.03633** | 2.50740 | **0.26083** |
| **sg13g2_ebufn_4** | 0.01860 | **0.00650** | 0.32940 | **0.01865** | 2.50740 | **0.13086** |
| **sg13g2_ebufn_2** | 0.01860 | **0.00340** | 0.32940 | **0.01496** | 2.50740 | **0.11399** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_ebufn_8** | 0.01860 | **0.01433** | 0.32940 | **0.04028** | 2.50740 | **0.26329** |
| **sg13g2_ebufn_4** | 0.01860 | **0.00774** | 0.32940 | **0.02056** | 2.50740 | **0.13200** |
| **sg13g2_ebufn_2** | 0.01860 | **0.00488** | 0.32940 | **0.01675** | 2.50740 | **0.11480** |

**Passive power(pJ) for TE_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_ebufn_8 | 0.01860 | **-0.00645** | 0.32940 | **0.00173** | 2.50740 | **0.10916** |
| sg13g2_ebufn_4 | 0.01860 | **-0.00265** | 0.32940 | **0.00772** | 2.50740 | **0.11860** |
| sg13g2_ebufn_2 | 0.01860 | **-0.00108** | 0.32940 | **0.00931** | 2.50740 | **0.10775** |

**Passive power(pJ) for TE_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_ebufn_8 | 0.01860 | **0.09774** | 0.32940 | **0.10920** | 2.50740 | **0.21577** |
| sg13g2_ebufn_4 | 0.01860 | **0.05010** | 0.32940 | **0.06259** | 2.50740 | **0.17197** |
| sg13g2_ebufn_2 | 0.01860 | **0.02608** | 0.32940 | **0.03769** | 2.50740 | **0.13443** |

# BUx

## Truth Table

| INPUT | OUTPUT |
|:-----:|:------:|
| A | X |
| 0 | 0 |
| 1 | 1 |

## Footprint

| Cell Name | Area |
|:---------:|:----:|
| sg13g2_buf_16 | 45.36000 |
| sg13g2_buf_8 | 23.58720 |
| sg13g2_buf_4 | 14.51520 |
| sg13g2_buf_1 | 7.25760 |
| sg13g2_buf_2 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
| --- | --- | --- |
| | A | X |
| sg13g2_buf_16 | 0.01945 | 4.80000 |
| sg13g2_buf_8 | 0.00975 | 2.40000 |
| sg13g2_buf_4 | 0.00422 | 1.20000 |
| sg13g2_buf_1 | 0.00264 | 0.30000 |
| sg13g2_buf_2 | 0.00297 | 0.60000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
| --- | --- | --- | --- |
| | Min. | Avg | Max. |
| sg13g2_buf_16 | 7714.47000 | 10319.30000 | 12924.20000 |
| sg13g2_buf_8 | 3857.26000 | 5159.68000 | 6462.10000 |
| sg13g2_buf_4 | 1614.29000 | 2412.18000 | 3210.06000 |
| sg13g2_buf_1 | 711.89000 | 797.55300 | 883.21600 |
| sg13g2_buf_2 | 1028.62000 | 1336.10000 | 1643.58000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_buf_16** | **A->X (RR)** | 0.01860 | 0.00100 | **0.03103** | 0.32940 | 1.03680 | **0.17558** | 2.50740 | 4.80000 | **0.62201** |
| **sg13g2_buf_8** | **A->X (RR)** | 0.01860 | 0.00100 | **0.03064** | 0.32940 | 0.51840 | **0.17432** | 2.50740 | 2.40000 | **0.62012** |
| **sg13g2_buf_4** | **A->X (RR)** | 0.01860 | 0.00100 | **0.03832** | 0.32940 | 0.25920 | **0.20018** | 2.50740 | 1.20000 | **0.74109** |
| **sg13g2_buf_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.02661** | 0.32940 | 0.06480 | **0.15545** | 2.50740 | 0.30000 | **0.57989** |
| **sg13g2_buf_2** | **A->X (RR)** | 0.01860 | 0.00100 | **0.03026** | 0.32940 | 0.12960 | **0.17070** | 2.50740 | 0.60000 | **0.61486** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_buf_16** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03332** | 0.32940 | 1.03680 | **0.16854** | 2.50740 | 4.80000 | **0.58543** |
| **sg13g2_buf_8** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03284** | 0.32940 | 0.51840 | **0.16705** | 2.50740 | 2.40000 | **0.58501** |
| **sg13g2_buf_4** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03242** | 0.32940 | 0.25920 | **0.15931** | 2.50740 | 1.20000 | **0.49534** |
| **sg13g2_buf_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.02755** | 0.32940 | 0.06480 | **0.14396** | 2.50740 | 0.30000 | **0.53034** |
| **sg13g2_buf_2** | **A->X (FF)** | 0.01860 | 0.00100 | **0.03159** | 0.32940 | 0.12960 | **0.15993** | 2.50740 | 0.60000 | **0.55834** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_buf_16 | A | 0.01860 | 0.00100 | **0.15641** | 0.32940 | 1.03680 | **0.23069** | 2.50740 | 4.80000 | **0.89740** |
| sg13g2_buf_8 | A | 0.01860 | 0.00100 | **0.07686** | 0.32940 | 0.51840 | **0.11437** | 2.50740 | 2.40000 | **0.44713** |
| sg13g2_buf_4 | A | 0.01860 | 0.00100 | **0.03895** | 0.32940 | 0.25920 | **0.05241** | 2.50740 | 1.20000 | **0.18973** |
| sg13g2_buf_1 | A | 0.01860 | 0.00100 | **0.01106** | 0.32940 | 0.06480 | **0.02061** | 2.50740 | 0.30000 | **0.10115** |
| sg13g2_buf_2 | A | 0.01860 | 0.00100 | **0.01959** | 0.32940 | 0.12960 | **0.03055** | 2.50740 | 0.60000 | **0.12539** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_buf_16 | A | 0.01860 | 0.00100 | **0.15494** | 0.32940 | 1.03680 | **0.23098** | 2.50740 | 4.80000 | **0.88336** |
| sg13g2_buf_8 | A | 0.01860 | 0.00100 | **0.07605** | 0.32940 | 0.51840 | **0.11379** | 2.50740 | 2.40000 | **0.43873** |
| sg13g2_buf_4 | A | 0.01860 | 0.00100 | **0.03810** | 0.32940 | 0.25920 | **0.05343** | 2.50740 | 1.20000 | **0.18422** |
| sg13g2_buf_1 | A | 0.01860 | 0.00100 | **0.01091** | 0.32940 | 0.06480 | **0.02087** | 2.50740 | 0.30000 | **0.10000** |
| sg13g2_buf_2 | A | 0.01860 | 0.00100 | **0.01939** | 0.32940 | 0.12960 | **0.03083** | 2.50740 | 0.60000 | **0.12439** |

# DECAPx

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_decap_4** | 7.25760 |
| **sg13g2_decap_8** | 12.70080 |

## Pin Capacitance Information
## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | **Min.** | **Avg** | **Max.** |
| **sg13g2_decap_4** | 5984.39000 | 5984.39000 | 5984.39000 |
| **sg13g2_decap_8** | 11968.80000 | 11968.80000 | 11968.80000 |

# DFFRRx

## Truth Table

| INPUT | | | OUTPUT | |
|---|---|---|---|---|
| D | RESET_B | CLK | Q | Q_N |
| 0 | 1 | R | 0 | 1 |
| 1 | 1 | R | 1 | 0 |
| x | 0 | x | 0 | 1 |
| x | 1 | x | IQ | IQN |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_dfrbp_2 | 54.43200 |
| sg13g2_dfrbp_1 | 47.17440 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) | |
|---|---|---|---|---|---|
| | D | RESET_B | CLK | Q | Q_N |
| sg13g2_dfrbp_2 | 0.00180 | 0.00661 | 0.00337 | 0.60000 | 0.60000 |
| sg13g2_dfrbp_1 | 0.00193 | 0.00708 | 0.00311 | 0.30000 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_dfrbp_2** | 4783.36000 | 5625.51000 | 6222.84000 |
| **sg13g2_dfrbp_1** | 3675.26000 | 4489.18000 | 5112.30000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK->Q (RR)** | 0.01860 | 0.00100 | **0.11376** | 0.32940 | 0.12960 | **0.24602** | 2.50740 | 0.60000 | **0.65588** |
| **sg13g2_dfrbp_1** | **CLK->Q (RR)** | 0.01860 | 0.00100 | **0.09274** | 0.32940 | 0.06480 | **0.22484** | 2.50740 | 0.30000 | **0.60424** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK->Q (RF)** | 0.01860 | 0.00100 | **0.10252** | 0.32940 | 0.12960 | **0.22393** | 2.50740 | 0.60000 | **0.56367** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.13454** | 0.32940 | 0.12960 | **0.28489** | 2.50740 | 0.60000 | **0.76838** |
| **sg13g2_dfrbp_1** | **CLK->Q (RF)** | 0.01860 | 0.00100 | **0.09029** | 0.32940 | 0.06480 | **0.21024** | 2.50740 | 0.30000 | **0.52826** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.11760** | 0.32940 | 0.06480 | **0.26583** | 2.50740 | 0.30000 | **0.74312** |

**Delay(ns) to Q_N rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK->Q_N (RR)** | 0.01860 | 0.00100 | **0.06979** | 0.32940 | 0.12960 | **0.22047** | 2.50740 | 0.60000 | **0.60481** |
| | **RESET_B->Q_N (FR)** | 0.01860 | 0.00100 | **0.10242** | 0.32940 | 0.12960 | **0.28055** | 2.50740 | 0.60000 | **0.80894** |
| **sg13g2_dfrbp_1** | **CLK->Q_N (RR)** | 0.01860 | 0.00100 | **0.06993** | 0.32940 | 0.06480 | **0.21436** | 2.50740 | 0.30000 | **0.57783** |
| | **RESET_B->Q_N (FR)** | 0.01860 | 0.00100 | **0.09744** | 0.32940 | 0.06480 | **0.26881** | 2.50740 | 0.30000 | **0.79232** |

**Delay(ns) to Q_N falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK->Q_N (RF)** | 0.01860 | 0.00100 | **0.07580** | 0.32940 | 0.12960 | **0.22860** | 2.50740 | 0.60000 | **0.59624** |
| **sg13g2_dfrbp_1** | **CLK->Q_N (RF)** | 0.01860 | 0.00100 | **0.07105** | 0.32940 | 0.06480 | **0.21270** | 2.50740 | 0.30000 | **0.55446** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dfrbp_2 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.02934** | 1.26300 | 1.26300 | **-0.11333** | 2.50740 | 2.50740 | **-0.15938** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.05135** | 1.26300 | 1.26300 | **0.13492** | 2.50740 | 2.50740 | **0.18004** |
| sg13g2_dfrbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.02934** | 1.26300 | 1.26300 | **-0.12412** | 2.50740 | 2.50740 | **-0.17709** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.04890** | 1.26300 | 1.26300 | **0.14031** | 2.50740 | 2.50740 | **0.19480** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dfrbp_2 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.01712** | 1.26300 | 1.26300 | **-0.11873** | 2.50740 | 2.50740 | **-0.18595** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.04646** | 1.26300 | 1.26300 | **0.15111** | 2.50740 | 2.50740 | **0.21841** |
| sg13g2_dfrbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.01712** | 1.26300 | 1.26300 | **-0.12682** | 2.50740 | 2.50740 | **-0.20661** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.04401** | 1.26300 | 1.26300 | **0.15920** | 2.50740 | 2.50740 | **0.23908** |

**Constraints(ns) for RESET_B rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dfrbp_2 | recovery | CLK (R) | 0.01860 | 0.01860 | **0.05379** | 1.26300 | 1.26300 | **0.18079** | 2.50740 | 2.50740 | **0.29515** |
| | removal | CLK (R) | 0.01860 | 0.01860 | **-0.04646** | 1.26300 | 1.26300 | **-0.17809** | 2.50740 | 2.50740 | **-0.29220** |
| sg13g2_dfrbp_1 | recovery | CLK (R) | 0.01860 | 0.01860 | **0.05135** | 1.26300 | 1.26300 | **0.18889** | 2.50740 | 2.50740 | **0.31582** |
| | removal | CLK (R) | 0.01860 | 0.01860 | **-0.04401** | 1.26300 | 1.26300 | **-0.18349** | 2.50740 | 2.50740 | **-0.30991** |

**Min Pulse Width (ns) for RESET_B:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dfrbp_2** | - | 3.3435 |
| **sg13g2_dfrbp_1** | - | 3.3435 |

**Min Pulse Width (ns) for CLK:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dfrbp_2** | 3.3435 | 3.3435 |
| **sg13g2_dfrbp_1** | 3.3435 | 3.3435 |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK** | 0.01860 | 0.00100 | **0.08448** | 0.32940 | 0.12960 | **0.26758** | 2.50740 | 0.60000 | **1.03498** |
| **sg13g2_dfrbp_1** | **CLK** | 0.01860 | 0.00100 | **0.06244** | 0.32940 | 0.06480 | **0.16162** | 2.50740 | 0.30000 | **0.60082** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK** | 0.01860 | 0.00100 | **0.08174** | 0.32940 | 0.12960 | **0.26926** | 2.50740 | 0.60000 | **1.02960** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.06422** | 0.32940 | 0.12960 | **0.24516** | 2.50740 | 0.60000 | **0.93241** |
| **sg13g2_dfrbp_1** | **CLK** | 0.01860 | 0.00100 | **0.06067** | 0.32940 | 0.06480 | **0.16085** | 2.50740 | 0.30000 | **0.59443** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.04264** | 0.32940 | 0.06480 | **0.13770** | 2.50740 | 0.30000 | **0.50543** |

**Internal switching power(pJ) to Q_N rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK** | 0.01860 | 0.00100 | **0.08185** | 0.32940 | 0.12960 | **0.26935** | 2.50740 | 0.60000 | **1.03118** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.06416** | 0.32940 | 0.12960 | **0.24562** | 2.50740 | 0.60000 | **0.93358** |
| **sg13g2_dfrbp_1** | **CLK** | 0.01860 | 0.00100 | **0.06073** | 0.32940 | 0.06480 | **0.16093** | 2.50740 | 0.30000 | **0.59527** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.04258** | 0.32940 | 0.06480 | **0.13786** | 2.50740 | 0.30000 | **0.50607** |

**Internal switching power(pJ) to Q_N falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dfrbp_2** | **CLK** | 0.01860 | 0.00100 | **0.08458** | 0.32940 | 0.12960 | **0.26751** | 2.50740 | 0.60000 | **1.03318** |
| **sg13g2_dfrbp_1** | **CLK** | 0.01860 | 0.00100 | **0.06245** | 0.32940 | 0.06480 | **0.16159** | 2.50740 | 0.30000 | **0.59976** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dfrbp_2** | 0.01860 | **0.00169** | 0.32940 | **0.00677** | 2.50740 | **0.05119** |
| **sg13g2_dfrbp_1** | 0.01860 | **0.00191** | 0.32940 | **0.00692** | 2.50740 | **0.05124** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | 0.01860 | **0.00209** | 0.32940 | **0.00738** | 2.50740 | **0.05241** |
| sg13g2_dfrbp_1 | 0.01860 | **0.00237** | 0.32940 | **0.00758** | 2.50740 | **0.05253** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | **CLK** | 0.01860 | **0.00169** | 0.32940 | **0.00677** | 2.50740 | **0.05119** |
| | **(!CLK * RESET_B)** | 0.01860 | **0.02233** | 0.32940 | **0.02805** | 2.50740 | **0.08244** |
| | **(!CLK * !RESET_B)** | 0.01860 | **-0.00008** | 0.32940 | **-0.00007** | 2.50740 | **-0.00007** |
| sg13g2_dfrbp_1 | **CLK** | 0.01860 | **0.00191** | 0.32940 | **0.00692** | 2.50740 | **0.05124** |
| | **(!CLK * RESET_B)** | 0.01860 | **0.01929** | 0.32940 | **0.02510** | 2.50740 | **0.07894** |
| | **(!CLK * !RESET_B)** | 0.01860 | **0.00015** | 0.32940 | **0.00015** | 2.50740 | **0.00015** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | **CLK** | 0.01860 | **0.00209** | 0.32940 | **0.00738** | 2.50740 | **0.05241** |
| | **(!CLK * RESET_B)** | 0.01860 | **0.01849** | 0.32940 | **0.02462** | 2.50740 | **0.08002** |
| | **(!CLK * !RESET_B)** | 0.01860 | **0.00024** | 0.32940 | **0.00024** | 2.50740 | **0.00025** |
| sg13g2_dfrbp_1 | **CLK** | 0.01860 | **0.00237** | 0.32940 | **0.00758** | 2.50740 | **0.05253** |
| | **(!CLK * RESET_B)** | 0.01860 | **0.01739** | 0.32940 | **0.02352** | 2.50740 | **0.07830** |
| | **(!CLK * !RESET_B)** | 0.01860 | **0.00008** | 0.32940 | **0.00008** | 2.50740 | **0.00008** |

**Passive power(pJ) for RESET_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | 0.01860 | **0.02505** | 0.32940 | **0.03135** | 2.50740 | **0.10324** |
| sg13g2_dfrbp_1 | 0.01860 | **0.00483** | 0.32940 | **0.00901** | 2.50740 | **0.05367** |

**Passive power(pJ) for RESET_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | 0.01860 | **0.01615** | 0.32940 | **0.02272** | 2.50740 | **0.09502** |
| sg13g2_dfrbp_1 | 0.01860 | **0.01454** | 0.32940 | **0.02114** | 2.50740 | **0.09309** |

**Passive power(pJ) for RESET_B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | (CLK * D * !Q * Q_N) | 0.01860 | **0.00415** | 0.32940 | **0.00844** | 2.50740 | **0.05326** |
| | (CLK * !D * !Q * Q_N) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!CLK * D * !Q * Q_N) | 0.01860 | **0.02505** | 0.32940 | **0.03135** | 2.50740 | **0.10324** |
| | (!CLK * !D * !Q * Q_N) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_dfrbp_1 | (CLK * D * !Q * Q_N) | 0.01860 | **0.00483** | 0.32940 | **0.00901** | 2.50740 | **0.05367** |
| | (CLK * !D * !Q * Q_N) | 0.01860 | **0.00007** | 0.32940 | **0.00008** | 2.50740 | **0.00006** |
| | (!CLK * D * !Q * Q_N) | 0.01860 | **0.02255** | 0.32940 | **0.02884** | 2.50740 | **0.10074** |
| | (!CLK * !D * !Q * Q_N) | 0.01860 | **0.00018** | 0.32940 | **0.00018** | 2.50740 | **0.00017** |

**Passive power(pJ) for RESET_B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | (CLK * D * !Q * Q_N) | 0.01860 | **0.07930** | 0.32940 | **0.09445** | 2.50740 | **0.21946** |
| | (CLK * !D * !Q * Q_N) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!CLK * D * !Q * Q_N) | 0.01860 | **0.01615** | 0.32940 | **0.02272** | 2.50740 | **0.09502** |
| | (!CLK * !D * !Q * Q_N) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_dfrbp_1 | (CLK * D * !Q * Q_N) | 0.01860 | **0.05553** | 0.32940 | **0.07045** | 2.50740 | **0.19303** |
| | (CLK * !D * !Q * Q_N) | 0.01860 | **-0.00007** | 0.32940 | **-0.00008** | 2.50740 | **-0.00006** |
| | (!CLK * D * !Q * Q_N) | 0.01860 | **0.01454** | 0.32940 | **0.02114** | 2.50740 | **0.09309** |
| | (!CLK * !D * !Q * Q_N) | 0.01860 | **-0.00018** | 0.32940 | **-0.00018** | 2.50740 | **-0.00017** |

**Passive power(pJ) for CLK rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dfrbp_2** | 0.01860 | **0.01897** | 0.32940 | **0.03217** | 2.50740 | **0.15320** |
| **sg13g2_dfrbp_1** | 0.01860 | **0.01890** | 0.32940 | **0.03090** | 2.50740 | **0.14353** |

**Passive power(pJ) for CLK falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dfrbp_2** | 0.01860 | **0.03836** | 0.32940 | **0.05234** | 2.50740 | **0.17707** |
| **sg13g2_dfrbp_1** | 0.01860 | **0.03653** | 0.32940 | **0.04954** | 2.50740 | **0.16697** |

**Passive power(pJ) for CLK rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | (D * RESET_B * Q * !Q_N) | 0.01860 | **0.01897** | 0.32940 | **0.03217** | 2.50740 | **0.15320** |
| | (D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02001** | 0.32940 | **0.03317** | 2.50740 | **0.15404** |
| | (!D * RESET_B * !Q * Q_N) | 0.01860 | **0.01862** | 0.32940 | **0.03179** | 2.50740 | **0.15268** |
| | (!D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02006** | 0.32940 | **0.03321** | 2.50740 | **0.15422** |
| sg13g2_dfrbp_1 | (D * RESET_B * Q * !Q_N) | 0.01860 | **0.01942** | 0.32940 | **0.03145** | 2.50740 | **0.14402** |
| | (D * !RESET_B * !Q * Q_N) | 0.01860 | **0.01886** | 0.32940 | **0.03084** | 2.50740 | **0.14350** |
| | (!D * RESET_B * !Q * Q_N) | 0.01860 | **0.01842** | 0.32940 | **0.03048** | 2.50740 | **0.14315** |
| | (!D * !RESET_B * !Q * Q_N) | 0.01860 | **0.01890** | 0.32940 | **0.03090** | 2.50740 | **0.14353** |

**Passive power(pJ) for CLK falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dfrbp_2 | (D * RESET_B * Q * !Q_N) | 0.01860 | **0.03836** | 0.32940 | **0.05234** | 2.50740 | **0.17707** |
| | (D * RESET_B * !Q * Q_N) | 0.01860 | **0.04010** | 0.32940 | **0.05399** | 2.50740 | **0.17873** |
| | (D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02012** | 0.32940 | **0.03370** | 2.50740 | **0.15344** |
| | (!D * RESET_B * Q * !Q_N) | 0.01860 | **0.10140** | 0.32940 | **0.11062** | 2.50740 | **0.23032** |
| | (!D * RESET_B * !Q * Q_N) | 0.01860 | **0.02009** | 0.32940 | **0.03369** | 2.50740 | **0.15358** |
| | (!D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02011** | 0.32940 | **0.03369** | 2.50740 | **0.15340** |
| sg13g2_dfrbp_1 | (D * RESET_B * Q * !Q_N) | 0.01860 | **0.03653** | 0.32940 | **0.04954** | 2.50740 | **0.16697** |
| | (D * RESET_B * !Q * Q_N) | 0.01860 | **0.03742** | 0.32940 | **0.05052** | 2.50740 | **0.16787** |
| | (D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02082** | 0.32940 | **0.03342** | 2.50740 | **0.14574** |
| | (!D * RESET_B * Q * !Q_N) | 0.01860 | **0.07846** | 0.32940 | **0.08950** | 2.50740 | **0.20206** |
| | (!D * RESET_B * !Q * Q_N) | 0.01860 | **0.02080** | 0.32940 | **0.03340** | 2.50740 | **0.14586** |
| | (!D * !RESET_B * !Q * Q_N) | 0.01860 | **0.02083** | 0.32940 | **0.03341** | 2.50740 | **0.14574** |

# DLHQ

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| D | GATE | Q |
| x | 0 | IQ |
| 0 | 1 | 0 |
| 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_dlhq_1** | 30.84480 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | **D** | **GATE** | **Q** |
| **sg13g2_dlhq_1** | 0.00260 | 0.00266 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_dlhq_1** | 2628.78000 | 3037.36000 | 3638.71000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhq_1 | **D->Q (RR)** | 0.01860 | 0.00100 | **0.08435** | 0.32940 | 0.06480 | **0.21002** | 2.50740 | 0.30000 | **0.58976** |
| | **GATE->Q (RR)** | 0.01860 | 0.00100 | **0.07247** | 0.32940 | 0.06480 | **0.19662** | 2.50740 | 0.30000 | **0.52019** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhq_1 | **D->Q (FF)** | 0.01860 | 0.00100 | **0.07622** | 0.32940 | 0.06480 | **0.18846** | 2.50740 | 0.30000 | **0.52472** |
| | **GATE->Q (RF)** | 0.01860 | 0.00100 | **0.07842** | 0.32940 | 0.06480 | **0.18917** | 2.50740 | 0.30000 | **0.45574** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dlhq_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.04401** | 1.26300 | 1.26300 | **-0.06476** | 2.50740 | 2.50740 | **-0.05018** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.04890** | 1.26300 | 1.26300 | **0.08635** | 2.50740 | 2.50740 | **0.09150** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dlhq_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.01712** | 1.26300 | 1.26300 | **0.03238** | 2.50740 | 2.50740 | **0.07969** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.02201** | 1.26300 | 1.26300 | **-0.02698** | 2.50740 | 2.50740 | **-0.07379** |

**Min Pulse Width (ns) for GATE:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dlhq_1** | 3.3435 | - |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhq_1 | D | 0.01860 | 0.00100 | **0.03131** | 0.32940 | 0.06480 | **0.03191** | 2.50740 | 0.30000 | **0.03628** |
| | GATE | 0.01860 | 0.00100 | **0.02788** | 0.32940 | 0.06480 | **0.02919** | 2.50740 | 0.30000 | **0.03541** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhq_1 | D | 0.01860 | 0.00100 | **0.03089** | 0.32940 | 0.06480 | **0.03177** | 2.50740 | 0.30000 | **0.03612** |
| | GATE | 0.01860 | 0.00100 | **0.02983** | 0.32940 | 0.06480 | **0.03123** | 2.50740 | 0.30000 | **0.02970** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhq_1** | 0.01860 | **0.00510** | 0.32940 | **0.01435** | 2.50740 | **0.09723** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhq_1** | 0.01860 | **0.00685** | 0.32940 | **0.01633** | 2.50740 | **0.09845** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | (!GATE * Q) | 0.01860 | **0.00505** | 0.32940 | **0.01412** | 2.50740 | **0.09707** |
| | (!GATE * !Q) | 0.01860 | **0.00510** | 0.32940 | **0.01435** | 2.50740 | **0.09723** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | (!GATE * Q) | 0.01860 | **0.00668** | 0.32940 | **0.01630** | 2.50740 | **0.09840** |
| | (!GATE * !Q) | 0.01860 | **0.00685** | 0.32940 | **0.01633** | 2.50740 | **0.09845** |

**Passive power(pJ) for GATE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | 0.01860 | **0.01301** | 0.32940 | **0.02456** | 2.50740 | **0.12741** |

**Passive power(pJ) for GATE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | 0.01860 | **0.02908** | 0.32940 | **0.04126** | 2.50740 | **0.14565** |

**Passive power(pJ) for GATE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | (!D * !Q) | 0.01860 | **0.01301** | 0.32940 | **0.02456** | 2.50740 | **0.12741** |

**Passive power(pJ) for GATE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhq_1 | (!D * !Q) | 0.01860 | **0.02908** | 0.32940 | **0.04126** | 2.50740 | **0.14565** |

# DLHRQ

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| D | RESET_B | GATE | Q |
| x | 0 | x | 0 |
| x | 1 | 0 | IQ |
| 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_dlhrq_1** | 27.21600 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | D | RESET_B | GATE | Q |
| **sg13g2_dlhrq_1** | 0.00243 | 0.00333 | 0.00255 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_dlhrq_1 | 2977.27000 | 3583.85000 | 4046.29000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlhrq_1** | **D->Q (RR)** | 0.01860 | 0.00100 | **0.09030** | 0.32940 | 0.06480 | **0.21840** | 2.50740 | 0.30000 | **0.59413** |
| | **GATE->Q (RR)** | 0.01860 | 0.00100 | **0.08181** | 0.32940 | 0.06480 | **0.20938** | 2.50740 | 0.30000 | **0.53307** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlhrq_1** | **D->Q (FF)** | 0.01860 | 0.00100 | **0.08026** | 0.32940 | 0.06480 | **0.19432** | 2.50740 | 0.30000 | **0.53692** |
| | **GATE->Q (RF)** | 0.01860 | 0.00100 | **0.08363** | 0.32940 | 0.06480 | **0.19751** | 2.50740 | 0.30000 | **0.47324** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.03367** | 0.32940 | 0.06480 | **0.16235** | 2.50740 | 0.30000 | **0.57823** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dlhrq_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.04157** | 1.26300 | 1.26300 | **-0.05667** | 2.50740 | 2.50740 | **-0.04132** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.04646** | 1.26300 | 1.26300 | **0.07825** | 2.50740 | 2.50740 | **0.07969** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dlhrq_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.01956** | 1.26300 | 1.26300 | **0.02968** | 2.50740 | 2.50740 | **0.07674** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.02445** | 1.26300 | 1.26300 | **-0.02698** | 2.50740 | 2.50740 | **-0.07084** |

**Constraints(ns) for RESET_B rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dlhrq_1 | recovery | GATE (F) | 0.01860 | 0.01860 | **-0.00734** | 1.26300 | 1.26300 | **-0.10254** | 2.50740 | 2.50740 | **-0.17119** |
| | removal | GATE (F) | 0.01860 | 0.01860 | **0.01467** | 1.26300 | 1.26300 | **0.10794** | 2.50740 | 2.50740 | **0.18004** |

**Min Pulse Width (ns) for RESET_B:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dlhrq_1** | - | 3.3435 |

**Min Pulse Width (ns) for GATE:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dlhrq_1** | 3.3435 | - |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhrq_1 | **D** | 0.01860 | 0.00100 | **0.00428** | 0.32940 | 0.06480 | **0.00479** | 2.50740 | 0.30000 | **0.00434** |
| | **GATE** | 0.01860 | 0.00100 | **0.02822** | 0.32940 | 0.06480 | **0.02913** | 2.50740 | 0.30000 | **0.03629** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhrq_1 | **D** | 0.01860 | 0.00100 | **-0.00428** | 0.32940 | 0.06480 | **-0.00479** | 2.50740 | 0.30000 | **-0.00434** |
| | **GATE** | 0.01860 | 0.00100 | **0.02815** | 0.32940 | 0.06480 | **0.02941** | 2.50740 | 0.30000 | **0.02803** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.01484** | 0.32940 | 0.06480 | **0.02616** | 2.50740 | 0.30000 | **0.12014** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhrq_1** | 0.01860 | **0.03236** | 0.32940 | **0.04140** | 2.50740 | **0.12857** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhrq_1** | 0.01860 | **0.04557** | 0.32940 | **0.05712** | 2.50740 | **0.14406** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | **(!GATE * RESET_B * Q)** | 0.01860 | **0.00035** | 0.32940 | **0.00951** | 2.50740 | **0.09238** |
| | **!RESET_B** | 0.01860 | **0.03236** | 0.32940 | **0.04140** | 2.50740 | **0.12857** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | (!GATE * RESET_B * Q) | 0.01860 | **0.00223** | 0.32940 | **0.01186** | 2.50740 | **0.09391** |
| | **!RESET_B** | 0.01860 | **0.04557** | 0.32940 | **0.05712** | 2.50740 | **0.14406** |

**Passive power(pJ) for RESET_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | (D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | (D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for GATE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhrq_1 | 0.01860 | **0.01368** | 0.32940 | **0.02509** | 2.50740 | **0.12734** |

**Passive power(pJ) for GATE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhrq_1** | 0.01860 | **0.02943** | 0.32940 | **0.04151** | 2.50740 | **0.14570** |

**Passive power(pJ) for GATE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhrq_1** | **(D * !RESET_B * !Q)** | 0.01860 | **0.01948** | 0.32940 | **0.03148** | 2.50740 | **0.14141** |
| | **(!D * !RESET_B * !Q)** | 0.01860 | **0.01368** | 0.32940 | **0.02509** | 2.50740 | **0.12734** |

**Passive power(pJ) for GATE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhrq_1** | **(D * !RESET_B * !Q)** | 0.01860 | **0.02329** | 0.32940 | **0.03645** | 2.50740 | **0.14664** |
| | **(!D * RESET_B * !Q)** | 0.01860 | **0.02943** | 0.32940 | **0.04151** | 2.50740 | **0.14570** |
| | **(!D * !RESET_B * !Q)** | 0.01860 | **0.02947** | 0.32940 | **0.04160** | 2.50740 | **0.14561** |

# DLHR

## Truth Table

| INPUT | | | OUTPUT | |
|---|---|---|---|---|
| D | RESET_B | GATE | Q | Q_N |
| x | 0 | x | 0 | 1 |
| x | 1 | 0 | IQ | IQN |
| 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_dlhr_1** | 32.65920 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) | |
|---|---|---|---|---|---|
| | D | RESET_B | GATE | Q | Q_N |
| **sg13g2_dlhr_1** | 0.00239 | 0.00351 | 0.00262 | 0.30000 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_dlhr_1 | 3709.29000 | 4395.13000 | 4779.32000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D->Q (RR)** | 0.01860 | 0.00100 | **0.09776** | 0.32940 | 0.06480 | **0.22983** | 2.50740 | 0.30000 | **0.60632** |
| | **GATE->Q (RR)** | 0.01860 | 0.00100 | **0.08956** | 0.32940 | 0.06480 | **0.22154** | 2.50740 | 0.30000 | **0.54675** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D->Q (FF)** | 0.01860 | 0.00100 | **0.08312** | 0.32940 | 0.06480 | **0.19816** | 2.50740 | 0.30000 | **0.53687** |
| | **GATE->Q (RF)** | 0.01860 | 0.00100 | **0.08660** | 0.32940 | 0.06480 | **0.20214** | 2.50740 | 0.30000 | **0.47464** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.03648** | 0.32940 | 0.06480 | **0.17169** | 2.50740 | 0.30000 | **0.58054** |

**Delay(ns) to Q_N rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D->Q_N (FR)** | 0.01860 | 0.00100 | **0.10100** | 0.32940 | 0.06480 | **0.22201** | 2.50740 | 0.30000 | **0.60649** |
| | **GATE->Q_N (RR)** | 0.01860 | 0.00100 | **0.10454** | 0.32940 | 0.06480 | **0.22589** | 2.50740 | 0.30000 | **0.54446** |
| | **RESET_B->Q_N (FR)** | 0.01860 | 0.00100 | **0.05437** | 0.32940 | 0.06480 | **0.18942** | 2.50740 | 0.30000 | **0.59145** |

**Delay(ns) to Q_N falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D->Q_N (RF)** | 0.01860 | 0.00100 | **0.11809** | 0.32940 | 0.06480 | **0.22875** | 2.50740 | 0.30000 | **0.55896** |
| | **GATE->Q_N (RF)** | 0.01860 | 0.00100 | **0.10976** | 0.32940 | 0.06480 | **0.22054** | 2.50740 | 0.30000 | **0.49925** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Constraint(ns) | | | |
| sg13g2_dlhr_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.04646** | 1.26300 | 1.26300 | **-0.06206** | 2.50740 | 2.50740 | **-0.04722** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.05135** | 1.26300 | 1.26300 | **0.08095** | 2.50740 | 2.50740 | **0.08264** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Constraint(ns) | | | |
| sg13g2_dlhr_1 | hold | GATE (F) | 0.01860 | 0.01860 | **-0.01956** | 1.26300 | 1.26300 | **0.02968** | 2.50740 | 2.50740 | **0.07674** |
| | setup | GATE (F) | 0.01860 | 0.01860 | **0.02445** | 1.26300 | 1.26300 | **-0.02698** | 2.50740 | 2.50740 | **-0.07084** |

**Constraints(ns) for RESET_B rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Constraint(ns) | | | |
| sg13g2_dlhr_1 | recovery | GATE (F) | 0.01860 | 0.01860 | **-0.00245** | 1.26300 | 1.26300 | **-0.07016** | 2.50740 | 2.50740 | **-0.12101** |
| | removal | GATE (F) | 0.01860 | 0.01860 | **0.00978** | 1.26300 | 1.26300 | **0.07825** | 2.50740 | 2.50740 | **0.12692** |

**Min Pulse Width (ns) for RESET_B:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dlhr_1** | - | 3.3435 |

**Min Pulse Width (ns) for GATE:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dlhr_1** | 3.3435 | - |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D** | 0.01860 | 0.00100 | **0.01060** | 0.32940 | 0.06480 | **0.01110** | 2.50740 | 0.30000 | **0.01084** |
| | **GATE** | 0.01860 | 0.00100 | **0.02238** | 0.32940 | 0.06480 | **0.02307** | 2.50740 | 0.30000 | **0.02657** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D** | 0.01860 | 0.00100 | **0.00311** | 0.32940 | 0.06480 | **0.00265** | 2.50740 | 0.30000 | **0.00186** |
| | **GATE** | 0.01860 | 0.00100 | **0.02222** | 0.32940 | 0.06480 | **0.02316** | 2.50740 | 0.30000 | **0.02211** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.01530** | 0.32940 | 0.06480 | **0.02180** | 2.50740 | 0.30000 | **0.07516** |

**Internal switching power(pJ) to Q_N rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D** | 0.01860 | 0.00100 | **0.00313** | 0.32940 | 0.06480 | **0.00280** | 2.50740 | 0.30000 | **0.00210** |
| | **GATE** | 0.01860 | 0.00100 | **0.02883** | 0.32940 | 0.06480 | **0.03553** | 2.50740 | 0.30000 | **0.08613** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.01534** | 0.32940 | 0.06480 | **0.02178** | 2.50740 | 0.30000 | **0.07514** |

**Internal switching power(pJ) to Q_N falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dlhr_1 | **D** | 0.01860 | 0.00100 | **0.01059** | 0.32940 | 0.06480 | **0.01103** | 2.50740 | 0.30000 | **0.01055** |
| | **GATE** | 0.01860 | 0.00100 | **0.02240** | 0.32940 | 0.06480 | **0.02298** | 2.50740 | 0.30000 | **0.02632** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhr_1** | 0.01860 | **0.03165** | 0.32940 | **0.04081** | 2.50740 | **0.12818** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | 0.01860 | **0.04514** | 0.32940 | **0.05682** | 2.50740 | **0.14390** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (!GATE * RESET_B * Q) | 0.01860 | **0.00181** | 0.32940 | **0.01106** | 2.50740 | **0.09436** |
| | !RESET_B | 0.01860 | **0.03165** | 0.32940 | **0.04081** | 2.50740 | **0.12818** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (!GATE * RESET_B * Q) | 0.01860 | **0.00359** | 0.32940 | **0.01332** | 2.50740 | **0.09574** |
| | !RESET_B | 0.01860 | **0.04514** | 0.32940 | **0.05682** | 2.50740 | **0.14390** |

**Passive power(pJ) for RESET_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * !GATE * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for GATE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhr_1** | 0.01860 | **0.01319** | 0.32940 | **0.02465** | 2.50740 | **0.12742** |

**Passive power(pJ) for GATE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dlhr_1** | 0.01860 | **0.02911** | 0.32940 | **0.04118** | 2.50740 | **0.14544** |

**Passive power(pJ) for GATE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (D * !RESET_B * !Q) | 0.01860 | **0.01899** | 0.32940 | **0.03100** | 2.50740 | **0.14153** |
| | (!D * !RESET_B * !Q) | 0.01860 | **0.01319** | 0.32940 | **0.02465** | 2.50740 | **0.12742** |

**Passive power(pJ) for GATE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dlhr_1 | (D * !RESET_B * !Q) | 0.01860 | **0.02384** | 0.32940 | **0.03705** | 2.50740 | **0.14763** |
| | (!D * RESET_B * !Q) | 0.01860 | **0.02911** | 0.32940 | **0.04118** | 2.50740 | **0.14544** |
| | (!D * !RESET_B * !Q) | 0.01860 | **0.02916** | 0.32940 | **0.04122** | 2.50740 | **0.14598** |

# DLLRQ

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| D | RESET_B | GATE_N | Q |
| x | 0 | x | 0 |
| 0 | 1 | 0 | 0 |
| x | 1 | 1 | IQ |
| 1 | 1 | 0 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_dllrq_1** | 29.03040 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | D | RESET_B | GATE_N | Q |
| **sg13g2_dllrq_1** | 0.00235 | 0.00335 | 0.00251 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_dllrq_1** | 2977.19000 | 3585.19000 | 4046.29000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dllrq_1** | **D->Q (RR)** | 0.01860 | 0.00100 | **0.08957** | 0.32940 | 0.06480 | **0.21731** | 2.50740 | 0.30000 | **0.59208** |
| | **GATE_N->Q (FR)** | 0.01860 | 0.00100 | **0.09899** | 0.32940 | 0.06480 | **0.23804** | 2.50740 | 0.30000 | **0.69495** |
| | **RESET_B->Q (RR)** | 0.01860 | 0.00100 | **0.04139** | 0.32940 | 0.06480 | **0.17258** | 2.50740 | 0.30000 | **0.60692** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dllrq_1** | **D->Q (FF)** | 0.01860 | 0.00100 | **0.07967** | 0.32940 | 0.06480 | **0.19245** | 2.50740 | 0.30000 | **0.53284** |
| | **GATE_N->Q (FF)** | 0.01860 | 0.00100 | **0.07603** | 0.32940 | 0.06480 | **0.20567** | 2.50740 | 0.30000 | **0.62722** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.03389** | 0.32940 | 0.06480 | **0.16195** | 2.50740 | 0.30000 | **0.57819** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllrq_1 | hold | GATE_N (R) | 0.01860 | 0.01860 | **-0.03179** | 1.26300 | 1.26300 | **-0.05667** | 2.50740 | 2.50740 | **-0.08855** |
| | setup | GATE_N (R) | 0.01860 | 0.01860 | **0.03668** | 1.26300 | 1.26300 | **0.05936** | 2.50740 | 2.50740 | **0.09445** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllrq_1 | hold | GATE_N (R) | 0.01860 | 0.01860 | **-0.03912** | 1.26300 | 1.26300 | **-0.14301** | 2.50740 | 2.50740 | **-0.21251** |
| | setup | GATE_N (R) | 0.01860 | 0.01860 | **0.04401** | 1.26300 | 1.26300 | **0.16460** | 2.50740 | 2.50740 | **0.25383** |

**Constraints(ns) for RESET_B rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllrq_1 | recovery | GATE_N (R) | 0.01860 | 0.01860 | **-0.01712** | 1.26300 | 1.26300 | **-0.02429** | 2.50740 | 2.50740 | **-0.00295** |
| | removal | GATE_N (R) | 0.01860 | 0.01860 | **0.02445** | 1.26300 | 1.26300 | **0.02968** | 2.50740 | 2.50740 | **0.00885** |

**Min Pulse Width (ns) for RESET_B:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dllrq_1** | - | 3.3435 |

**Min Pulse Width (ns) for GATE_N:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dllrq_1** | - | 3.3435 |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllrq_1 | **D** | 0.01860 | 0.00100 | **0.01574** | 0.32940 | 0.06480 | **0.01641** | 2.50740 | 0.30000 | **0.02039** |
| | **GATE_N** | 0.01860 | 0.00100 | **0.01382** | 0.32940 | 0.06480 | **0.01434** | 2.50740 | 0.30000 | **0.01158** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.01946** | 0.32940 | 0.06480 | **0.02793** | 2.50740 | 0.30000 | **0.12302** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllrq_1 | **D** | 0.01860 | 0.00100 | **0.00320** | 0.32940 | 0.06480 | **0.00131** | 2.50740 | 0.30000 | **0.00030** |
| | **GATE_N** | 0.01860 | 0.00100 | **0.01131** | 0.32940 | 0.06480 | **0.01308** | 2.50740 | 0.30000 | **0.01777** |
| | **RESET_B** | 0.01860 | 0.00100 | **0.01503** | 0.32940 | 0.06480 | **0.02643** | 2.50740 | 0.30000 | **0.12173** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllrq_1** | 0.01860 | **0.02060** | 0.32940 | **0.02973** | 2.50740 | **0.11296** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllrq_1** | 0.01860 | **0.03232** | 0.32940 | **0.04450** | 2.50740 | **0.13178** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | **(GATE_N * RESET_B * Q)** | 0.01860 | **0.00015** | 0.32940 | **0.00937** | 2.50740 | **0.09256** |
| | **!RESET_B** | 0.01860 | **0.02060** | 0.32940 | **0.02973** | 2.50740 | **0.11296** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | (GATE_N * RESET_B * Q) | 0.01860 | **0.00218** | 0.32940 | **0.01188** | 2.50740 | **0.09427** |
| | !RESET_B | 0.01860 | **0.03232** | 0.32940 | **0.04450** | 2.50740 | **0.13178** |

Passive power(pJ) for RESET_B rising :

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllrq_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

Passive power(pJ) for RESET_B falling :

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllrq_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

Passive power(pJ) for RESET_B rising (conditional):

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | (D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

Passive power(pJ) for RESET_B falling (conditional):

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | (D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

Passive power(pJ) for GATE_N rising :

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | 0.01860 | **0.01227** | 0.32940 | **0.02367** | 2.50740 | **0.12637** |

**Passive power(pJ) for GATE_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | 0.01860 | **0.02942** | 0.32940 | **0.04161** | 2.50740 | **0.14603** |

**Passive power(pJ) for GATE_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | (D * !RESET_B * !Q) | 0.01860 | **0.02281** | 0.32940 | **0.03393** | 2.50740 | **0.13582** |
| | (!D * !RESET_B * !Q) | 0.01860 | **0.01227** | 0.32940 | **0.02367** | 2.50740 | **0.12637** |

**Passive power(pJ) for GATE_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllrq_1 | (D * !RESET_B * !Q) | 0.01860 | **0.02348** | 0.32940 | **0.03575** | 2.50740 | **0.13833** |
| | (!D * RESET_B * !Q) | 0.01860 | **0.02942** | 0.32940 | **0.04161** | 2.50740 | **0.14603** |
| | (!D * !RESET_B * !Q) | 0.01860 | **0.02946** | 0.32940 | **0.04159** | 2.50740 | **0.14613** |

# DLLR

## Truth Table

| INPUT | | | OUTPUT | |
|---|---|---|---|---|
| D | RESET_B | GATE_N | Q | Q_N |
| x | 0 | x | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 |
| x | 1 | 1 | IQ | IQN |
| 1 | 1 | 0 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_dllr_1** | 34.47360 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) | |
|---|---|---|---|---|---|
| | D | RESET_B | GATE_N | Q | Q_N |
| **sg13g2_dllr_1** | 0.00246 | 0.00347 | 0.00264 | 0.30000 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_dllr_1** | 3709.89000 | 4417.04000 | 4779.26000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | **D->Q (RR)** | 0.01860 | 0.00100 | **0.09832** | 0.32940 | 0.06480 | **0.22992** | 2.50740 | 0.30000 | **0.60515** |
| | **GATE_N->Q (FR)** | 0.01860 | 0.00100 | **0.10784** | 0.32940 | 0.06480 | **0.25118** | 2.50740 | 0.30000 | **0.70844** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | **D->Q (FF)** | 0.01860 | 0.00100 | **0.08408** | 0.32940 | 0.06480 | **0.19927** | 2.50740 | 0.30000 | **0.53924** |
| | **GATE_N->Q (FF)** | 0.01860 | 0.00100 | **0.08094** | 0.32940 | 0.06480 | **0.21349** | 2.50740 | 0.30000 | **0.63694** |
| | **RESET_B->Q (FF)** | 0.01860 | 0.00100 | **0.03636** | 0.32940 | 0.06480 | **0.17271** | 2.50740 | 0.30000 | **0.53099** |

**Delay(ns) to Q_N rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | **D->Q_N (FR)** | 0.01860 | 0.00100 | **0.10177** | 0.32940 | 0.06480 | **0.22268** | 2.50740 | 0.30000 | **0.60789** |
| | **GATE_N->Q_N (FR)** | 0.01860 | 0.00100 | **0.09874** | 0.32940 | 0.06480 | **0.23695** | 2.50740 | 0.30000 | **0.70519** |
| | **RESET_B->Q_N (FR)** | 0.01860 | 0.00100 | **0.05446** | 0.32940 | 0.06480 | **0.19068** | 2.50740 | 0.30000 | **0.59273** |

**Delay(ns) to Q_N falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | **D->Q_N (RF)** | 0.01860 | 0.00100 | **0.11846** | 0.32940 | 0.06480 | **0.22888** | 2.50740 | 0.30000 | **0.55793** |
| | **GATE_N->Q_N (FF)** | 0.01860 | 0.00100 | **0.12784** | 0.32940 | 0.06480 | **0.25018** | 2.50740 | 0.30000 | **0.66153** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllr_1 | hold | GATE_N (R) | 0.01860 | 0.01860 | **-0.03668** | 1.26300 | 1.26300 | **-0.05936** | 2.50740 | 2.50740 | **-0.09150** |
| | setup | GATE_N (R) | 0.01860 | 0.01860 | **0.04157** | 1.26300 | 1.26300 | **0.06476** | 2.50740 | 2.50740 | **0.09740** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllr_1 | hold | GATE_N (R) | 0.01860 | 0.01860 | **-0.04157** | 1.26300 | 1.26300 | **-0.14571** | 2.50740 | 2.50740 | **-0.21251** |
| | setup | GATE_N (R) | 0.01860 | 0.01860 | **0.04646** | 1.26300 | 1.26300 | **0.16730** | 2.50740 | 2.50740 | **0.25383** |

**Constraints(ns) for RESET_B rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_dllr_1 | recovery | GATE_N (R) | 0.01860 | 0.01860 | **-0.01223** | 1.26300 | 1.26300 | **0.00540** | 2.50740 | 2.50740 | **0.05018** |
| | removal | GATE_N (R) | 0.01860 | 0.01860 | **0.01956** | 1.26300 | 1.26300 | **0.00000** | 2.50740 | 2.50740 | **-0.04427** |

**Min Pulse Width (ns) for RESET_B:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dllr_1** | - | 3.3435 |

**Min Pulse Width (ns) for GATE_N:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_dllr_1** | - | 3.3435 |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | D | 0.01860 | 0.00100 | **0.02192** | 0.32940 | 0.06480 | **0.10972** | 2.50740 | 0.30000 | **0.42922** |
| | GATE_N | 0.01860 | 0.00100 | **0.04548** | 0.32940 | 0.06480 | **0.13308** | 2.50740 | 0.30000 | **0.45068** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | D | 0.01860 | 0.00100 | **0.00692** | 0.32940 | 0.06480 | **0.08868** | 2.50740 | 0.30000 | **0.40692** |
| | GATE_N | 0.01860 | 0.00100 | **0.04194** | 0.32940 | 0.06480 | **0.13081** | 2.50740 | 0.30000 | **0.45542** |
| | RESET_B | 0.01860 | 0.00100 | **0.04718** | 0.32940 | 0.06480 | **0.14566** | 2.50740 | 0.30000 | **0.54181** |

**Internal switching power(pJ) to Q_N rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | D | 0.01860 | 0.00100 | **0.00698** | 0.32940 | 0.06480 | **0.08888** | 2.50740 | 0.30000 | **0.40751** |
| | GATE_N | 0.01860 | 0.00100 | **0.05815** | 0.32940 | 0.06480 | **0.15932** | 2.50740 | 0.30000 | **0.58832** |
| | RESET_B | 0.01860 | 0.00100 | **0.04722** | 0.32940 | 0.06480 | **0.14563** | 2.50740 | 0.30000 | **0.54154** |

**Internal switching power(pJ) to Q_N falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_dllr_1 | D | 0.01860 | 0.00100 | **0.02192** | 0.32940 | 0.06480 | **0.10970** | 2.50740 | 0.30000 | **0.42846** |
| | GATE_N | 0.01860 | 0.00100 | **0.04551** | 0.32940 | 0.06480 | **0.13297** | 2.50740 | 0.30000 | **0.45013** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | 0.01860 | **0.03304** | 0.32940 | **0.04220** | 2.50740 | **0.12947** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | 0.01860 | **0.04551** | 0.32940 | **0.06147** | 2.50740 | **0.14852** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | **(GATE_N * RESET_B * Q)** | 0.01860 | **0.00192** | 0.32940 | **0.01114** | 2.50740 | **0.09416** |
| | **!RESET_B** | 0.01860 | **0.03304** | 0.32940 | **0.04220** | 2.50740 | **0.12947** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | **(GATE_N * RESET_B * Q)** | 0.01860 | **0.00450** | 0.32940 | **0.01420** | 2.50740 | **0.09645** |
| | **!RESET_B** | 0.01860 | **0.04551** | 0.32940 | **0.06147** | 2.50740 | **0.14852** |

**Passive power(pJ) for RESET_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllr_1 | (D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for RESET_B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllr_1 | (D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| | (!D * GATE_N * !Q) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for GATE_N rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllr_1 | 0.01860 | **0.02670** | 0.32940 | **0.03885** | 2.50740 | **0.14331** |

**Passive power(pJ) for GATE_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllr_1 | 0.01860 | **0.01616** | 0.32940 | **0.02848** | 2.50740 | **0.13230** |

**Passive power(pJ) for GATE_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_dllr_1 | (D * !RESET_B * !Q) | 0.01860 | **0.02305** | 0.32940 | **0.03412** | 2.50740 | **0.13595** |
| | (!D * RESET_B * !Q) | 0.01860 | **0.02670** | 0.32940 | **0.03885** | 2.50740 | **0.14331** |
| | (!D * !RESET_B * !Q) | 0.01860 | **0.02671** | 0.32940 | **0.03889** | 2.50740 | **0.14348** |

**Passive power(pJ) for GATE_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_dllr_1** | **(D * !RESET_B * !Q)** | 0.01860 | **0.02381** | 0.32940 | **0.03604** | 2.50740 | **0.13840** |
| | **(!D * !RESET_B * !Q)** | 0.01860 | **0.01616** | 0.32940 | **0.02848** | 2.50740 | **0.13230** |

# DLY1

## Truth Table

| INPUT | OUTPUT |
|:-----:|:------:|
| A | X |
| 0 | 0 |
| 1 | 1 |

## Footprint

| Cell Name | Area |
|:---------:|:----:|
| sg13g2_dlygate4sd1_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|:---------:|:-----------:|:-----------:|
|  | A | X |
| sg13g2_dlygate4sd1_1 | 0.00169 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|:---------:|:-----------:|:---:|:---:|
|  | Min. | Avg | Max. |
| sg13g2_dlygate4sd1_1 | 1089.91000 | 1219.16000 | 1348.41000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd1_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.05667** | 0.32940 | 0.06480 | **0.17426** | 2.50740 | 0.30000 | **0.45835** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd1_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.06515** | 0.32940 | 0.06480 | **0.19869** | 2.50740 | 0.30000 | **0.66189** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd1_1** | A | 0.01860 | 0.00100 | **0.02457** | 0.32940 | 0.06480 | **0.03132** | 2.50740 | 0.30000 | **0.08669** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd1_1** | A | 0.01860 | 0.00100 | **0.02342** | 0.32940 | 0.06480 | **0.03072** | 2.50740 | 0.30000 | **0.08678** |

# DLY2

## Truth Table

| INPUT | OUTPUT |
|:---:|:---:|
| A | X |
| 0 | 0 |
| 1 | 1 |

## Footprint

| Cell Name | Area |
|:---:|:---:|
| sg13g2_dlygate4sd2_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|:---:|:---:|:---:|
| | A | X |
| sg13g2_dlygate4sd2_1 | 0.00168 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|:---:|:---:|:---:|:---:|
| | Min. | Avg | Max. |
| sg13g2_dlygate4sd2_1 | 1542.40000 | 1671.65000 | 1800.90000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd2_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.08669** | 0.32940 | 0.06480 | **0.21463** | 2.50740 | 0.30000 | **0.52985** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd2_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.09585** | 0.32940 | 0.06480 | **0.24326** | 2.50740 | 0.30000 | **0.72067** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd2_1** | **A** | 0.01860 | 0.00100 | **0.02995** | 0.32940 | 0.06480 | **0.03566** | 2.50740 | 0.30000 | **0.08744** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd2_1** | **A** | 0.01860 | 0.00100 | **0.02913** | 0.32940 | 0.06480 | **0.03517** | 2.50740 | 0.30000 | **0.08860** |

# DLY4

## Truth Table

| INPUT | OUTPUT |
|:-----:|:------:|
| A | X |
| 0 | 0 |
| 1 | 1 |

## Footprint

| Cell Name | Area |
|:---------:|:----:|
| sg13g2_dlygate4sd3_1 | 16.32960 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|:---------:|:-----------:|:-----------:|
|           | A           | X           |
| sg13g2_dlygate4sd3_1 | 0.00168 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|:---------:|:-----------:|:-----------:|:-----------:|
|           | Min. | Avg | Max. |
| sg13g2_dlygate4sd3_1 | 3719.07000 | 3848.29000 | 3977.51000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd3_1** | **A->X (RR)** | 0.01860 | 0.00100 | **0.18794** | 0.32940 | 0.06480 | **0.33729** | 2.50740 | 0.30000 | **0.71091** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd3_1** | **A->X (FF)** | 0.01860 | 0.00100 | **0.19013** | 0.32940 | 0.06480 | **0.36551** | 2.50740 | 0.30000 | **0.88993** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd3_1** | A | 0.01860 | 0.00100 | **0.04502** | 0.32940 | 0.06480 | **0.04837** | 2.50740 | 0.30000 | **0.09704** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_dlygate4sd3_1** | A | 0.01860 | 0.00100 | **0.04471** | 0.32940 | 0.06480 | **0.04788** | 2.50740 | 0.30000 | **0.09751** |

# EINVINx

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | TE_B | Z |
| 0 | 0 | 1 |
| 1 | 0 | 0 |
| - | 1 | HiZ |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_einvn_4 | 23.58720 |
| sg13g2_einvn_2 | 16.32960 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | TE_B | Z |
| sg13g2_einvn_4 | 0.00822 | 0.01030 | 1.20000 |
| sg13g2_einvn_2 | 0.00418 | 0.00549 | 0.60000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_einvn_4 | 4387.32000 | 5429.26000 | 6471.20000 |
| sg13g2_einvn_2 | 2203.90000 | 2724.87000 | 3245.84000 |

# Delay Information

**Delay(ns) to Z rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_4 | **A->Z (FR)** | 0.01860 | 0.01103 | **0.01357** | 0.32940 | 0.26923 | **0.29766** | 2.50740 | 1.21003 | **1.59807** |
| | **TE_B->Z (RR)** | 0.01860 | 0.01103 | **0.03076** | 0.32940 | 0.26923 | **0.07414** | 2.50740 | 1.21003 | **0.14589** |
| | **TE_B->Z (FR)** | 0.01860 | 0.01103 | **0.01694** | 0.32940 | 0.26923 | **0.25470** | 2.50740 | 1.21003 | **1.24909** |
| sg13g2_einvn_2 | **A->Z (FR)** | 0.01860 | 0.00609 | **0.01465** | 0.32940 | 0.13469 | **0.29728** | 2.50740 | 0.60509 | **1.59463** |
| | **TE_B->Z (RR)** | 0.01860 | 0.00609 | **0.02953** | 0.32940 | 0.13469 | **0.07081** | 2.50740 | 0.60509 | **0.14045** |
| | **TE_B->Z (FR)** | 0.01860 | 0.00609 | **0.01753** | 0.32940 | 0.13469 | **0.25470** | 2.50740 | 0.60509 | **1.25002** |

**Delay(ns) to Z falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_4 | **A->Z (RF)** | 0.01860 | 0.01562 | **0.01247** | 0.32940 | 0.27382 | **0.26250** | 2.50740 | 1.21462 | **1.39901** |
| sg13g2_einvn_2 | **A->Z (RF)** | 0.01860 | 0.00845 | **0.01342** | 0.32940 | 0.13705 | **0.26246** | 2.50740 | 0.60745 | **1.39740** |

# Power Information

**Internal switching power(pJ) to Z rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_4 | A | 0.01860 | 0.01103 | **0.02042** | 0.32940 | 0.26923 | **0.03773** | 2.50740 | 1.21003 | **0.18953** |
| | TE_B | 0.01860 | 0.01103 | **0.03419** | 0.32940 | 0.26923 | **0.03273** | 2.50740 | 1.21003 | **0.03164** |
| sg13g2_einvn_2 | A | 0.01860 | 0.00609 | **0.01031** | 0.32940 | 0.13469 | **0.01844** | 2.50740 | 0.60509 | **0.09353** |
| | TE_B | 0.01860 | 0.00609 | **0.01688** | 0.32940 | 0.13469 | **0.01622** | 2.50740 | 0.60509 | **0.01481** |

**Internal switching power(pJ) to Z falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_4 | A | 0.01860 | 0.01562 | **0.01879** | 0.32940 | 0.27382 | **0.03458** | 2.50740 | 1.21462 | **0.16532** |
| sg13g2_einvn_2 | A | 0.01860 | 0.00845 | **0.00964** | 0.32940 | 0.13705 | **0.01729** | 2.50740 | 0.60745 | **0.08307** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_4 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_einvn_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_4 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_einvn_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for TE_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_4 | 0.01860 | **-0.02546** | 0.32940 | **-0.03857** | 2.50740 | **0.07057** |
| sg13g2_einvn_2 | 0.01860 | **-0.01286** | 0.32940 | **-0.01904** | 2.50740 | **0.04317** |

**Passive power(pJ) for TE_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_4 | 0.01860 | **0.02546** | 0.32940 | **0.03857** | 2.50740 | **0.15001** |
| sg13g2_einvn_2 | 0.01860 | **0.01286** | 0.32940 | **0.02017** | 2.50740 | **0.08257** |

# FILLx

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_fill_1 | 1.81440 |
| sg13g2_fill_2 | 3.62880 |
| sg13g2_fill_8 | 14.51520 |
| sg13g2_fill_4 | 7.25760 |

## Pin Capacitance Information
## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_fill_1 | 0.00000 | 0.00000 | 0.00000 |
| sg13g2_fill_2 | 0.00000 | 0.00000 | 0.00000 |
| sg13g2_fill_8 | 0.00000 | 0.00000 | 0.00000 |
| sg13g2_fill_4 | 0.00000 | 0.00000 | 0.00000 |

# GCLK

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| GATE | CLK | GCLK |
| x | 0 | 0 |
| x | 1 | GCLK |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_lgcp_1 | 27.21600 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | GATE | CLK | GCLK |
| sg13g2_lgcp_1 | 0.00263 | 0.00561 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_lgcp_1 | 3351.73000 | 3485.75000 | 3690.93000 |

# Delay Information

**Delay(ns) to GCLK rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_lgcp_1** | **CLK->GCLK (RR)** | 0.01860 | 0.00100 | **0.03673** | 0.32940 | 0.06480 | **0.16344** | 2.50740 | 0.30000 | **0.58486** |

**Delay(ns) to GCLK falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_lgcp_1** | **CLK->GCLK (FF)** | 0.01860 | 0.00100 | **0.03179** | 0.32940 | 0.06480 | **0.15614** | 2.50740 | 0.30000 | **0.57201** |

# Constraint Information

**Constraints(ns) for GATE rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_lgcp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.01740** | 1.26300 | 1.26300 | **-0.12412** | 2.50740 | 2.50740 | **-0.22034** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.03887** | 1.26300 | 1.26300 | **0.15651** | 2.50740 | 2.50740 | **0.25963** |

**Constraints(ns) for GATE falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_lgcp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.00499** | 1.26300 | 1.26300 | **-0.00540** | 2.50740 | 2.50740 | **0.00579** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.02074** | 1.26300 | 1.26300 | **0.03778** | 2.50740 | 2.50740 | **0.04315** |

**Min Pulse Width (ns) for CLK:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_lgcp_1** | 3.3435 | 3.3435 |

# Power Information

**Internal switching power(pJ) to GCLK rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_lgcp_1 | CLK | 0.01860 | 0.00100 | **0.02381** | 0.32940 | 0.06480 | **0.03137** | 2.50740 | 0.30000 | **0.11249** |

**Internal switching power(pJ) to GCLK falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_lgcp_1 | CLK | 0.01860 | 0.00100 | **0.01592** | 0.32940 | 0.06480 | **0.02591** | 2.50740 | 0.30000 | **0.10591** |

**Passive power(pJ) for GATE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | 0.01860 | **0.03656** | 0.32940 | **0.04537** | 2.50740 | **0.13497** |

**Passive power(pJ) for GATE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | 0.01860 | **0.03968** | 0.32940 | **0.06253** | 2.50740 | **0.15139** |

**Passive power(pJ) for GATE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | !CLK | 0.01860 | **0.03656** | 0.32940 | **0.04537** | 2.50740 | **0.13497** |

**Passive power(pJ) for GATE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | !CLK | 0.01860 | **0.03968** | 0.32940 | **0.06253** | 2.50740 | **0.15139** |

**Passive power(pJ) for CLK rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | 0.01860 | **0.00699** | 0.32940 | **0.01835** | 2.50740 | **0.12034** |

**Passive power(pJ) for CLK falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_lgcp_1 | 0.01860 | **0.01129** | 0.32940 | **0.02343** | 2.50740 | **0.12723** |

# INx

## Truth Table

| INPUT | OUTPUT |
|:-----:|:------:|
| A | Y |
| 0 | 1 |
| 1 | 0 |

## Footprint

| Cell Name | Area |
|:---------:|:----:|
| sg13g2_inv_16 | 34.47360 |
| sg13g2_inv_8 | 18.14400 |
| sg13g2_inv_4 | 10.88640 |
| sg13g2_inv_2 | 7.25760 |
| sg13g2_inv_1 | 5.44320 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
| --- | --- | --- |
| | A | Y |
| sg13g2_inv_16 | 0.05094 | 4.80000 |
| sg13g2_inv_8 | 0.02491 | 2.40000 |
| sg13g2_inv_4 | 0.01247 | 1.20000 |
| sg13g2_inv_2 | 0.00625 | 0.60000 |
| sg13g2_inv_1 | 0.00319 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
| --- | --- | --- | --- |
| | Min. | Avg | Max. |
| sg13g2_inv_16 | 3337.24000 | 7505.02000 | 11672.80000 |
| sg13g2_inv_8 | 1668.61000 | 3752.55000 | 5836.48000 |
| sg13g2_inv_4 | 834.31700 | 1876.25000 | 2918.19000 |
| sg13g2_inv_2 | 417.15800 | 938.11400 | 1459.07000 |
| sg13g2_inv_1 | 208.57800 | 469.06300 | 729.54800 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_inv_16** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.00869** | 0.32940 | 1.03680 | **0.20431** | 2.50740 | 4.80000 | **1.12968** |
| **sg13g2_inv_8** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.00859** | 0.32940 | 0.51840 | **0.20369** | 2.50740 | 2.40000 | **1.12724** |
| **sg13g2_inv_4** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.00876** | 0.32940 | 0.25920 | **0.20340** | 2.50740 | 1.20000 | **1.12573** |
| **sg13g2_inv_2** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.00950** | 0.32940 | 0.12960 | **0.20289** | 2.50740 | 0.60000 | **1.12331** |
| **sg13g2_inv_1** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.01114** | 0.32940 | 0.06480 | **0.20317** | 2.50740 | 0.30000 | **1.12345** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_inv_16** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.00853** | 0.32940 | 1.03680 | **0.19278** | 2.50740 | 4.80000 | **1.04920** |
| **sg13g2_inv_8** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.00845** | 0.32940 | 0.51840 | **0.19285** | 2.50740 | 2.40000 | **1.05024** |
| **sg13g2_inv_4** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.00859** | 0.32940 | 0.25920 | **0.19258** | 2.50740 | 1.20000 | **1.04967** |
| **sg13g2_inv_2** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.00926** | 0.32940 | 0.12960 | **0.19128** | 2.50740 | 0.60000 | **1.04106** |
| **sg13g2_inv_1** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01076** | 0.32940 | 0.06480 | **0.19149** | 2.50740 | 0.30000 | **1.04134** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_inv_16 | A | 0.01860 | 0.00100 | **0.04688** | 0.32940 | 1.03680 | **0.14773** | 2.50740 | 4.80000 | **1.02189** |
| sg13g2_inv_8 | A | 0.01860 | 0.00100 | **0.02256** | 0.32940 | 0.51840 | **0.07220** | 2.50740 | 2.40000 | **0.49852** |
| sg13g2_inv_4 | A | 0.01860 | 0.00100 | **0.01119** | 0.32940 | 0.25920 | **0.03621** | 2.50740 | 1.20000 | **0.25071** |
| sg13g2_inv_2 | A | 0.01860 | 0.00100 | **0.00555** | 0.32940 | 0.12960 | **0.01807** | 2.50740 | 0.60000 | **0.12540** |
| sg13g2_inv_1 | A | 0.01860 | 0.00100 | **0.00301** | 0.32940 | 0.06480 | **0.00932** | 2.50740 | 0.30000 | **0.06294** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_inv_16 | A | 0.01860 | 0.00100 | **0.03850** | 0.32940 | 1.03680 | **0.12535** | 2.50740 | 4.80000 | **0.90465** |
| sg13g2_inv_8 | A | 0.01860 | 0.00100 | **0.01852** | 0.32940 | 0.51840 | **0.06071** | 2.50740 | 2.40000 | **0.44794** |
| sg13g2_inv_4 | A | 0.01860 | 0.00100 | **0.00925** | 0.32940 | 0.25920 | **0.03036** | 2.50740 | 1.20000 | **0.22381** |
| sg13g2_inv_2 | A | 0.01860 | 0.00100 | **0.00471** | 0.32940 | 0.12960 | **0.01539** | 2.50740 | 0.60000 | **0.11216** |
| sg13g2_inv_1 | A | 0.01860 | 0.00100 | **0.00290** | 0.32940 | 0.06480 | **0.00815** | 2.50740 | 0.30000 | **0.05677** |

# ITL

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | TE_B | Z |
| 0 | 0 | 1 |
| 1 | 0 | 0 |
| - | 1 | HiZ |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_einvn_8 | 39.91680 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | TE_B | Z |
| sg13g2_einvn_8 | 0.01618 | 0.01738 | 2.40000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_einvn_8 | 8566.03000 | 10649.90000 | 12733.80000 |

# Delay Information

**Delay(ns) to Z rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_8 | **A->Z (FR)** | 0.01860 | 0.02091 | **0.01313** | 0.32940 | 0.53831 | **0.29927** | 2.50740 | 2.41991 | **1.60532** |
| | **TE_B->Z (RR)** | 0.01860 | 0.02091 | **0.04065** | 0.32940 | 0.53831 | **0.10159** | 2.50740 | 2.41991 | **0.21401** |
| | **TE_B->Z (FR)** | 0.01860 | 0.02091 | **0.01812** | 0.32940 | 0.53831 | **0.25710** | 2.50740 | 2.41991 | **1.25391** |

**Delay(ns) to Z falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_8 | **A->Z (RF)** | 0.01860 | 0.03002 | **0.01220** | 0.32940 | 0.54742 | **0.26424** | 2.50740 | 2.42902 | **1.40817** |

# Power Information

**Internal switching power(pJ) to Z rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_8 | A | 0.01860 | 0.02091 | **0.04052** | 0.32940 | 0.53831 | **0.07654** | 2.50740 | 2.41991 | **0.38846** |
| | TE_B | 0.01860 | 0.02091 | **0.07051** | 0.32940 | 0.53831 | **0.06732** | 2.50740 | 2.41991 | **0.06570** |

**Internal switching power(pJ) to Z falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_einvn_8 | A | 0.01860 | 0.03002 | **0.03671** | 0.32940 | 0.54742 | **0.06672** | 2.50740 | 2.42902 | **0.32446** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_8 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_8 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for TE_B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_8 | 0.01860 | **-0.04498** | 0.32940 | **-0.05803** | 2.50740 | **0.00781** |

**Passive power(pJ) for TE_B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_einvn_8 | 0.01860 | **0.04498** | 0.32940 | **0.05803** | 2.50740 | **0.16742** |

# KEEPSTATE

## Truth Table

| INPUT | OUTPUT |
|-------|--------|
| SH    | SH     |
| x     | -      |

## Footprint

| Cell Name        | Area    |
|------------------|---------|
| sg13g2_sighold   | 9.07200 |

## Pin Capacitance Information

| Cell Name      | Pin Cap(pf) | Max Cap(pf) |
|----------------|-------------|-------------|
|                | SH          | SH          |
| sg13g2_sighold | 0.00000     | -           |

## Leakage Information

| Cell Name      | Leakage(pW) | | |
|----------------|-----------|------------|------------|
|                | Min.      | Avg        | Max.       |
| sg13g2_sighold | 116.27500 | 1502.82000 | 2889.37000 |

# Passive Power Information

**Passive power(pJ) for SH rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sighold** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for SH falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sighold** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

# MUX2x

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A0 | A1 | S | X |
| 0 | 0 | x | 0 |
| 0 | 1 | 0 | 0 |
| x | 1 | 1 | 1 |
| 1 | x | 0 | 1 |
| 1 | 0 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_mux2_2 | 19.95840 |
| sg13g2_mux2_1 | 18.14400 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A0 | A1 | S | X |
| sg13g2_mux2_2 | 0.00223 | 0.00237 | 0.00584 | 0.60000 |
| sg13g2_mux2_1 | 0.00225 | 0.00239 | 0.00584 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_mux2_2** | 2161.21000 | 2771.13000 | 3144.89000 |
| **sg13g2_mux2_1** | 1907.10000 | 2302.08000 | 2933.22000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_mux2_2** | **A0->X (RR)** | 0.01860 | 0.00100 | **0.04414** | 0.32940 | 0.12960 | **0.19869** | 2.50740 | 0.60000 | **0.63219** |
| | **A1->X (RR)** | 0.01860 | 0.00100 | **0.04060** | 0.32940 | 0.12960 | **0.19944** | 2.50740 | 0.60000 | **0.63283** |
| | **S->X (-R)** | 0.01860 | 0.00100 | **0.04692** | 0.32940 | 0.12960 | **0.18933** | 2.50740 | 0.60000 | **0.61446** |
| **sg13g2_mux2_1** | **A0->X (RR)** | 0.01860 | 0.00100 | **0.03783** | 0.32940 | 0.06480 | **0.17758** | 2.50740 | 0.30000 | **0.58773** |
| | **A1->X (RR)** | 0.01860 | 0.00100 | **0.03706** | 0.32940 | 0.06480 | **0.17902** | 2.50740 | 0.30000 | **0.59062** |
| | **S->X (-R)** | 0.01860 | 0.00100 | **0.04074** | 0.32940 | 0.06480 | **0.17133** | 2.50740 | 0.30000 | **0.57805** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_mux2_2** | **A0->X (FF)** | 0.01860 | 0.00100 | **0.05330** | 0.32940 | 0.12960 | **0.21637** | 2.50740 | 0.60000 | **0.72237** |
| | **A1->X (FF)** | 0.01860 | 0.00100 | **0.05638** | 0.32940 | 0.12960 | **0.21793** | 2.50740 | 0.60000 | **0.73062** |
| | **S->X (-F)** | 0.01860 | 0.00100 | **0.06105** | 0.32940 | 0.12960 | **0.20109** | 2.50740 | 0.60000 | **0.67587** |
| **sg13g2_mux2_1** | **A0->X (FF)** | 0.01860 | 0.00100 | **0.04505** | 0.32940 | 0.06480 | **0.19022** | 2.50740 | 0.30000 | **0.67492** |
| | **A1->X (FF)** | 0.01860 | 0.00100 | **0.04625** | 0.32940 | 0.06480 | **0.19249** | 2.50740 | 0.30000 | **0.68396** |
| | **S->X (-F)** | 0.01860 | 0.00100 | **0.05112** | 0.32940 | 0.06480 | **0.17873** | 2.50740 | 0.30000 | **0.63665** |

**Delay(ns) to X rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | S->X (RR) | (!A0 * A1) | 0.01860 | 0.00100 | **0.04692** | 0.32940 | 0.12960 | **0.18933** | 2.50740 | 0.60000 | **0.61446** |
| | S->X (FR) | (A0 * !A1) | 0.01860 | 0.00100 | **0.06399** | 0.32940 | 0.12960 | **0.19592** | 2.50740 | 0.60000 | **0.58566** |
| sg13g2_mux2_1 | S->X (RR) | (!A0 * A1) | 0.01860 | 0.00100 | **0.04074** | 0.32940 | 0.06480 | **0.17133** | 2.50740 | 0.30000 | **0.57805** |
| | S->X (FR) | (A0 * !A1) | 0.01860 | 0.00100 | **0.05782** | 0.32940 | 0.06480 | **0.18458** | 2.50740 | 0.30000 | **0.57109** |

**Delay(ns) to X falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | S->X (FF) | (!A0 * A1) | 0.01860 | 0.00100 | **0.06105** | 0.32940 | 0.12960 | **0.20109** | 2.50740 | 0.60000 | **0.67587** |
| | S->X (RF) | (A0 * !A1) | 0.01860 | 0.00100 | **0.07681** | 0.32940 | 0.12960 | **0.20398** | 2.50740 | 0.60000 | **0.54257** |
| sg13g2_mux2_1 | S->X (FF) | (!A0 * A1) | 0.01860 | 0.00100 | **0.05112** | 0.32940 | 0.06480 | **0.17873** | 2.50740 | 0.30000 | **0.63665** |
| | S->X (RF) | (A0 * !A1) | 0.01860 | 0.00100 | **0.06690** | 0.32940 | 0.06480 | **0.18727** | 2.50740 | 0.30000 | **0.52432** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | A0 | 0.01860 | 0.00100 | **0.02942** | 0.32940 | 0.12960 | **0.03663** | 2.50740 | 0.60000 | **0.11785** |
| | A1 | 0.01860 | 0.00100 | **0.03761** | 0.32940 | 0.12960 | **0.04749** | 2.50740 | 0.60000 | **0.12769** |
| | S | 0.01860 | 0.00100 | **0.03333** | 0.32940 | 0.12960 | **0.04017** | 2.50740 | 0.60000 | **0.12462** |
| sg13g2_mux2_1 | A0 | 0.01860 | 0.00100 | **0.01983** | 0.32940 | 0.06480 | **0.02829** | 2.50740 | 0.30000 | **0.10912** |
| | A1 | 0.01860 | 0.00100 | **0.02507** | 0.32940 | 0.06480 | **0.03430** | 2.50740 | 0.30000 | **0.11452** |
| | S | 0.01860 | 0.00100 | **0.02404** | 0.32940 | 0.06480 | **0.03201** | 2.50740 | 0.30000 | **0.11656** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | A0 | 0.01860 | 0.00100 | **0.04213** | 0.32940 | 0.12960 | **0.05045** | 2.50740 | 0.60000 | **0.12907** |
| | A1 | 0.01860 | 0.00100 | **0.03140** | 0.32940 | 0.12960 | **0.03725** | 2.50740 | 0.60000 | **0.11795** |
| | S | 0.01860 | 0.00100 | **0.03080** | 0.32940 | 0.12960 | **0.03577** | 2.50740 | 0.60000 | **0.12077** |
| sg13g2_mux2_1 | A0 | 0.01860 | 0.00100 | **0.02641** | 0.32940 | 0.06480 | **0.03591** | 2.50740 | 0.30000 | **0.11493** |
| | A1 | 0.01860 | 0.00100 | **0.01995** | 0.32940 | 0.06480 | **0.02883** | 2.50740 | 0.30000 | **0.10965** |
| | S | 0.01860 | 0.00100 | **0.01996** | 0.32940 | 0.06480 | **0.02782** | 2.50740 | 0.30000 | **0.11310** |

**Internal switching power(pJ) to X rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | S | (A0 * !A1) | 0.01860 | 0.00100 | **0.02931** | 0.32940 | 0.12960 | **0.02864** | 2.50740 | 0.60000 | **0.03007** |
| | S | (!A0 * A1) | 0.01860 | 0.00100 | **0.03333** | 0.32940 | 0.12960 | **0.04017** | 2.50740 | 0.60000 | **0.12462** |
| sg13g2_mux2_1 | S | (A0 * !A1) | 0.01860 | 0.00100 | **0.01997** | 0.32940 | 0.06480 | **0.02012** | 2.50740 | 0.30000 | **0.02294** |
| | S | (!A0 * A1) | 0.01860 | 0.00100 | **0.02404** | 0.32940 | 0.06480 | **0.03201** | 2.50740 | 0.30000 | **0.11656** |

**Internal switching power(pJ) to X falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux2_2 | S | (A0 * !A1) | 0.01860 | 0.00100 | **0.03522** | 0.32940 | 0.12960 | **0.03325** | 2.50740 | 0.60000 | **0.03521** |
| | S | (!A0 * A1) | 0.01860 | 0.00100 | **0.03080** | 0.32940 | 0.12960 | **0.03577** | 2.50740 | 0.60000 | **0.12077** |
| sg13g2_mux2_1 | S | (A0 * !A1) | 0.01860 | 0.00100 | **0.02438** | 0.32940 | 0.06480 | **0.02462** | 2.50740 | 0.30000 | **0.02790** |
| | S | (!A0 * A1) | 0.01860 | 0.00100 | **0.01996** | 0.32940 | 0.06480 | **0.02782** | 2.50740 | 0.30000 | **0.11310** |

**Passive power(pJ) for S rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux2_2** | 0.01860 | **0.00266** | 0.32940 | **0.01163** | 2.50740 | **0.09426** |
| **sg13g2_mux2_1** | 0.01860 | **0.00267** | 0.32940 | **0.01163** | 2.50740 | **0.09424** |

**Passive power(pJ) for S falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux2_2** | 0.01860 | **0.00686** | 0.32940 | **0.01632** | 2.50740 | **0.09829** |
| **sg13g2_mux2_1** | 0.01860 | **0.00684** | 0.32940 | **0.01628** | 2.50740 | **0.09828** |

# MUX4

## Truth Table

| INPUT | | | | | | OUTPUT |
|---|---|---|---|---|---|---|
| A0 | A1 | A2 | A3 | S0 | S1 | X |
| 0 | 0 | 0 | 0 | x | x | 0 |
| 0 | x | 0 | 1 | 0 | x | 0 |
| x | 0 | x | 1 | 1 | 0 | 0 |
| x | x | x | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | x | x | 0 | 0 |
| 0 | x | 1 | x | 0 | 1 | 1 |
| 0 | x | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | x | 0 | x | 0 |
| 0 | 1 | x | x | 1 | 0 | 1 |
| 0 | 1 | x | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | x | 0 | 0 | 0 |
| 1 | 0 | 0 | x | 0 | 0 | 1 |
| 1 | x | 0 | 0 | x | 1 | 0 |
| 1 | 0 | x | 0 | 1 | x | 0 |
| 1 | x | 0 | 1 | 0 | 1 | 0 |
| 1 | x | 1 | x | 0 | x | 1 |
| 1 | 1 | 0 | x | x | 0 | 1 |
| 1 | 1 | 1 | x | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_mux4_1 | 38.10240 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | | | Max Cap(pf) |
|---|---|---|---|---|---|---|---|
| | A0 | A1 | A2 | A3 | S0 | S1 | X |
| sg13g2_mux4_1 | 0.00320 | 0.00318 | 0.00320 | 0.00329 | 0.00917 | 0.00558 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_mux4_1** | 2333.78000 | 3933.01000 | 5424.72000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | A0->X (RR) | 0.01860 | 0.00100 | **0.06511** | 0.32940 | 0.06480 | **0.21538** | 2.50740 | 0.30000 | **0.68952** |
| | A1->X (RR) | 0.01860 | 0.00100 | **0.06411** | 0.32940 | 0.06480 | **0.21453** | 2.50740 | 0.30000 | **0.68750** |
| | A2->X (RR) | 0.01860 | 0.00100 | **0.06716** | 0.32940 | 0.06480 | **0.21998** | 2.50740 | 0.30000 | **0.69746** |
| | A3->X (RR) | 0.01860 | 0.00100 | **0.06602** | 0.32940 | 0.06480 | **0.21940** | 2.50740 | 0.30000 | **0.69765** |
| | S0->X (-R) | 0.01860 | 0.00100 | **0.05888** | 0.32940 | 0.06480 | **0.22142** | 2.50740 | 0.30000 | **0.70201** |
| | S1->X (-R) | 0.01860 | 0.00100 | **0.03570** | 0.32940 | 0.06480 | **0.17828** | 2.50740 | 0.30000 | **0.61349** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | A0->X (FF) | 0.01860 | 0.00100 | **0.07143** | 0.32940 | 0.06480 | **0.21088** | 2.50740 | 0.30000 | **0.65216** |
| | A1->X (FF) | 0.01860 | 0.00100 | **0.07233** | 0.32940 | 0.06480 | **0.21153** | 2.50740 | 0.30000 | **0.65337** |
| | A2->X (FF) | 0.01860 | 0.00100 | **0.07557** | 0.32940 | 0.06480 | **0.21767** | 2.50740 | 0.30000 | **0.66419** |
| | A3->X (FF) | 0.01860 | 0.00100 | **0.07624** | 0.32940 | 0.06480 | **0.21729** | 2.50740 | 0.30000 | **0.66352** |
| | S0->X (-F) | 0.01860 | 0.00100 | **0.06642** | 0.32940 | 0.06480 | **0.22217** | 2.50740 | 0.30000 | **0.69536** |
| | S1->X (-F) | 0.01860 | 0.00100 | **0.04036** | 0.32940 | 0.06480 | **0.17692** | 2.50740 | 0.30000 | **0.62944** |

**Delay(ns) to X rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | S0->X (RR) | (!A2 * A3 * S1) | 0.01860 | 0.00100 | **0.05888** | 0.32940 | 0.06480 | **0.22142** | 2.50740 | 0.30000 | **0.70201** |
| | S0->X (RR) | (!A0 * A1 * !S1) | 0.01860 | 0.00100 | **0.05587** | 0.32940 | 0.06480 | **0.21416** | 2.50740 | 0.30000 | **0.68683** |
| | S0->X (FR) | (A2 * !A3 * S1) | 0.01860 | 0.00100 | **0.08378** | 0.32940 | 0.06480 | **0.22910** | 2.50740 | 0.30000 | **0.64942** |
| | S0->X (FR) | (A0 * !A1 * !S1) | 0.01860 | 0.00100 | **0.08180** | 0.32940 | 0.06480 | **0.22553** | 2.50740 | 0.30000 | **0.64385** |
| | S1->X (RR) | (!A1 * A3 * S0) | 0.01860 | 0.00100 | **0.03572** | 0.32940 | 0.06480 | **0.17825** | 2.50740 | 0.30000 | **0.61308** |
| | S1->X (RR) | (!A0 * A2 * !S0) | 0.01860 | 0.00100 | **0.03570** | 0.32940 | 0.06480 | **0.17828** | 2.50740 | 0.30000 | **0.61349** |
| | S1->X (FR) | (A1 * !A3 * S0) | 0.01860 | 0.00100 | **0.04619** | 0.32940 | 0.06480 | **0.18001** | 2.50740 | 0.30000 | **0.58222** |
| | S1->X (FR) | (A0 * !A2 * !S0) | 0.01860 | 0.00100 | **0.04612** | 0.32940 | 0.06480 | **0.17995** | 2.50740 | 0.30000 | **0.58230** |

**Delay(ns) to X falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | S0->X (FF) | (!A2 * A3 * S1) | 0.01860 | 0.00100 | **0.06642** | 0.32940 | 0.06480 | **0.22217** | 2.50740 | 0.30000 | **0.69536** |
| | S0->X (FF) | (!A0 * A1 * !S1) | 0.01860 | 0.00100 | **0.06106** | 0.32940 | 0.06480 | **0.21334** | 2.50740 | 0.30000 | **0.67893** |
| | S0->X (RF) | (A2 * !A3 * S1) | 0.01860 | 0.00100 | **0.08974** | 0.32940 | 0.06480 | **0.23089** | 2.50740 | 0.30000 | **0.61053** |
| | S0->X (RF) | (A0 * !A1 * !S1) | 0.01860 | 0.00100 | **0.08540** | 0.32940 | 0.06480 | **0.22529** | 2.50740 | 0.30000 | **0.60293** |
| | S1->X (FF) | (!A1 * A3 * S0) | 0.01860 | 0.00100 | **0.04036** | 0.32940 | 0.06480 | **0.17692** | 2.50740 | 0.30000 | **0.62944** |
| | S1->X (FF) | (!A0 * A2 * !S0) | 0.01860 | 0.00100 | **0.04028** | 0.32940 | 0.06480 | **0.17676** | 2.50740 | 0.30000 | **0.62847** |
| | S1->X (RF) | (A1 * !A3 * S0) | 0.01860 | 0.00100 | **0.04923** | 0.32940 | 0.06480 | **0.18127** | 2.50740 | 0.30000 | **0.54521** |
| | S1->X (RF) | (A0 * !A2 * !S0) | 0.01860 | 0.00100 | **0.04930** | 0.32940 | 0.06480 | **0.18132** | 2.50740 | 0.30000 | **0.54507** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | A0 | 0.01860 | 0.00100 | **0.02435** | 0.32940 | 0.06480 | **0.02990** | 2.50740 | 0.30000 | **0.10786** |
| | A1 | 0.01860 | 0.00100 | **0.03440** | 0.32940 | 0.06480 | **0.03973** | 2.50740 | 0.30000 | **0.11766** |
| | A2 | 0.01860 | 0.00100 | **0.02472** | 0.32940 | 0.06480 | **0.03015** | 2.50740 | 0.30000 | **0.10778** |
| | A3 | 0.01860 | 0.00100 | **0.02598** | 0.32940 | 0.06480 | **0.03142** | 2.50740 | 0.30000 | **0.10932** |
| | S0 | 0.01860 | 0.00100 | **0.02314** | 0.32940 | 0.06480 | **0.02963** | 2.50740 | 0.30000 | **0.10273** |
| | S1 | 0.01860 | 0.00100 | **0.01025** | 0.32940 | 0.06480 | **0.01694** | 2.50740 | 0.30000 | **0.07705** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | A0 | 0.01860 | 0.00100 | **0.03552** | 0.32940 | 0.06480 | **0.04070** | 2.50740 | 0.30000 | **0.11910** |
| | A1 | 0.01860 | 0.00100 | **0.03864** | 0.32940 | 0.06480 | **0.04387** | 2.50740 | 0.30000 | **0.12197** |
| | A2 | 0.01860 | 0.00100 | **0.03871** | 0.32940 | 0.06480 | **0.04374** | 2.50740 | 0.30000 | **0.12165** |
| | A3 | 0.01860 | 0.00100 | **0.02672** | 0.32940 | 0.06480 | **0.03174** | 2.50740 | 0.30000 | **0.10973** |
| | S0 | 0.01860 | 0.00100 | **0.02227** | 0.32940 | 0.06480 | **0.02898** | 2.50740 | 0.30000 | **0.10208** |
| | S1 | 0.01860 | 0.00100 | **0.01053** | 0.32940 | 0.06480 | **0.01728** | 2.50740 | 0.30000 | **0.07854** |

**Internal switching power(pJ) to X rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | S0 | (A2 * !A3 * S1) | 0.01860 | 0.00100 | **0.03051** | 0.32940 | 0.06480 | **0.02007** | 2.50740 | 0.30000 | **0.00000** |
| | S0 | (A0 * !A1 * !S1) | 0.01860 | 0.00100 | **0.03034** | 0.32940 | 0.06480 | **0.02001** | 2.50740 | 0.30000 | **0.00000** |
| | S0 | (!A2 * A3 * S1) | 0.01860 | 0.00100 | **0.02328** | 0.32940 | 0.06480 | **0.02995** | 2.50740 | 0.30000 | **0.10324** |
| | S0 | (!A0 * A1 * !S1) | 0.01860 | 0.00100 | **0.02314** | 0.32940 | 0.06480 | **0.02963** | 2.50740 | 0.30000 | **0.10273** |
| | S1 | (A1 * !A3 * S0) | 0.01860 | 0.00100 | **0.01643** | 0.32940 | 0.06480 | **0.02114** | 2.50740 | 0.30000 | **0.07031** |
| | S1 | (A0 * !A2 * !S0) | 0.01860 | 0.00100 | **0.01642** | 0.32940 | 0.06480 | **0.02112** | 2.50740 | 0.30000 | **0.07071** |
| | S1 | (!A1 * A3 * S0) | 0.01860 | 0.00100 | **0.01025** | 0.32940 | 0.06480 | **0.01694** | 2.50740 | 0.30000 | **0.07697** |
| | S1 | (!A0 * A2 * !S0) | 0.01860 | 0.00100 | **0.01025** | 0.32940 | 0.06480 | **0.01694** | 2.50740 | 0.30000 | **0.07705** |

**Internal switching power(pJ) to X falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_mux4_1 | S0 | (A2 * !A3 * S1) | 0.01860 | 0.00100 | **0.04815** | 0.32940 | 0.06480 | **0.03940** | 2.50740 | 0.30000 | **0.00000** |
| | S0 | (A0 * !A1 * !S1) | 0.01860 | 0.00100 | **0.04821** | 0.32940 | 0.06480 | **0.03986** | 2.50740 | 0.30000 | **0.00000** |
| | S0 | (!A2 * A3 * S1) | 0.01860 | 0.00100 | **0.02227** | 0.32940 | 0.06480 | **0.02898** | 2.50740 | 0.30000 | **0.10208** |
| | S0 | (!A0 * A1 * !S1) | 0.01860 | 0.00100 | **0.02281** | 0.32940 | 0.06480 | **0.02959** | 2.50740 | 0.30000 | **0.10314** |
| | S1 | (A1 * !A3 * S0) | 0.01860 | 0.00100 | **0.02058** | 0.32940 | 0.06480 | **0.02473** | 2.50740 | 0.30000 | **0.07302** |
| | S1 | (A0 * !A2 * !S0) | 0.01860 | 0.00100 | **0.02054** | 0.32940 | 0.06480 | **0.02473** | 2.50740 | 0.30000 | **0.07317** |
| | S1 | (!A1 * A3 * S0) | 0.01860 | 0.00100 | **0.00917** | 0.32940 | 0.06480 | **0.01596** | 2.50740 | 0.30000 | **0.07627** |
| | S1 | (!A0 * A2 * !S0) | 0.01860 | 0.00100 | **0.01053** | 0.32940 | 0.06480 | **0.01728** | 2.50740 | 0.30000 | **0.07854** |

**Passive power(pJ) for S0 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux4_1** | 0.01860 | **0.01008** | 0.32940 | **0.02989** | 2.50740 | **0.20518** |

**Passive power(pJ) for S0 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux4_1** | 0.01860 | **0.01805** | 0.32940 | **0.03862** | 2.50740 | **0.21152** |

**Passive power(pJ) for S0 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_mux4_1 | (A2 * A3 * S1) | 0.01860 | **0.00701** | 0.32940 | **0.02672** | 2.50740 | **0.20214** |
| | (A0 * A1 * !S1) | 0.01860 | **0.00797** | 0.32940 | **0.02710** | 2.50740 | **0.20173** |
| | (!A2 * !A3 * S1) | 0.01860 | **0.01008** | 0.32940 | **0.02989** | 2.50740 | **0.20518** |
| | (!A0 * !A1 * !S1) | 0.01860 | **0.01155** | 0.32940 | **0.03082** | 2.50740 | **0.20536** |

**Passive power(pJ) for S0 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_mux4_1 | (A2 * A3 * S1) | 0.01860 | **0.01913** | 0.32940 | **0.03973** | 2.50740 | **0.21295** |
| | (A0 * A1 * !S1) | 0.01860 | **0.02227** | 0.32940 | **0.04267** | 2.50740 | **0.21568** |
| | (!A2 * !A3 * S1) | 0.01860 | **0.01805** | 0.32940 | **0.03862** | 2.50740 | **0.21152** |
| | (!A0 * !A1 * !S1) | 0.01860 | **0.01236** | 0.32940 | **0.03238** | 2.50740 | **0.20549** |

**Passive power(pJ) for S1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux4_1** | 0.01860 | **0.00606** | 0.32940 | **0.01781** | 2.50740 | **0.11796** |

**Passive power(pJ) for S1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_mux4_1** | 0.01860 | **0.00784** | 0.32940 | **0.01986** | 2.50740 | **0.11811** |

**Passive power(pJ) for S1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_mux4_1 | (A1 * A3 * S0) | 0.01860 | **0.00328** | 0.32940 | **0.01502** | 2.50740 | **0.11447** |
| | (A0 * A2 * !S0) | 0.01860 | **0.00327** | 0.32940 | **0.01506** | 2.50740 | **0.11429** |
| | (!A1 * !A3 * S0) | 0.01860 | **0.00603** | 0.32940 | **0.01780** | 2.50740 | **0.11822** |
| | (!A0 * !A2 * !S0) | 0.01860 | **0.00606** | 0.32940 | **0.01781** | 2.50740 | **0.11796** |

**Passive power(pJ) for S1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_mux4_1 | (A1 * A3 * S0) | 0.01860 | **0.00785** | 0.32940 | **0.01989** | 2.50740 | **0.11816** |
| | (A0 * A2 * !S0) | 0.01860 | **0.00784** | 0.32940 | **0.01986** | 2.50740 | **0.11811** |
| | (!A1 * !A3 * S0) | 0.01860 | **0.00709** | 0.32940 | **0.01902** | 2.50740 | **0.11735** |
| | (!A0 * !A2 * !S0) | 0.01860 | **0.00711** | 0.32940 | **0.01902** | 2.50740 | **0.11730** |

# NAND2B1

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A_N | B | Y |
| x | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nand2b_1 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A_N | B | Y |
| sg13g2_nand2b_1 | 0.00262 | 0.00349 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nand2b_1 | 357.06300 | 1055.55000 | 1612.75000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_1 | A_N->Y (RR) | 0.01860 | 0.00100 | **0.02763** | 0.32940 | 0.06480 | **0.15641** | 2.50740 | 0.30000 | **0.58468** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.01431** | 0.32940 | 0.06480 | **0.20647** | 2.50740 | 0.30000 | **1.11925** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_1 | A_N->Y (FF) | 0.01860 | 0.00100 | **0.03234** | 0.32940 | 0.06480 | **0.20118** | 2.50740 | 0.30000 | **0.79197** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.01896** | 0.32940 | 0.06480 | **0.23143** | 2.50740 | 0.30000 | **1.20010** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_1 | A_N | 0.01860 | 0.00100 | **0.00537** | 0.32940 | 0.06480 | **0.00556** | 2.50740 | 0.30000 | **0.00513** |
| | B | 0.01860 | 0.00100 | **0.00321** | 0.32940 | 0.06480 | **0.00847** | 2.50740 | 0.30000 | **0.05650** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_1 | A_N | 0.01860 | 0.00100 | **0.00868** | 0.32940 | 0.06480 | **0.00924** | 2.50740 | 0.30000 | **0.00766** |
| | B | 0.01860 | 0.00100 | **0.00805** | 0.32940 | 0.06480 | **0.01185** | 2.50740 | 0.30000 | **0.05307** |

**Passive power(pJ) for A_N rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_1** | 0.01860 | **0.00608** | 0.32940 | **0.01577** | 2.50740 | **0.09917** |

**Passive power(pJ) for A_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_1** | 0.01860 | **0.00354** | 0.32940 | **0.01331** | 2.50740 | **0.09576** |

**Passive power(pJ) for A_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_1** | **!B** | 0.01860 | **0.00608** | 0.32940 | **0.01577** | 2.50740 | **0.09917** |

**Passive power(pJ) for A_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_1** | **!B** | 0.01860 | **0.00354** | 0.32940 | **0.01331** | 2.50740 | **0.09576** |

# NAND2B2

*sg13g2_stdcell_fast_1p65V_m40C Cell Library: Process sg13g2_stdcell_fast_1p65V_m40C, Voltage 1.65, Temp -40.00*

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A_N | B | Y |
| x | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_nand2b_2** | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A_N | B | Y |
| **sg13g2_nand2b_2** | 0.00249 | 0.00585 | 0.60000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nand2b_2 | 909.41600 | 1748.14000 | 2981.53000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_2 | A_N->Y (RR) | 0.01860 | 0.00100 | **0.03638** | 0.32940 | 0.12960 | **0.17856** | 2.50740 | 0.60000 | **0.62738** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.01102** | 0.32940 | 0.12960 | **0.20309** | 2.50740 | 0.60000 | **1.10780** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_2 | A_N->Y (FF) | 0.01860 | 0.00100 | **0.04257** | 0.32940 | 0.12960 | **0.23418** | 2.50740 | 0.60000 | **0.85626** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.01508** | 0.32940 | 0.12960 | **0.26953** | 2.50740 | 0.60000 | **1.44201** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_2 | A_N | 0.01860 | 0.00100 | **0.00965** | 0.32940 | 0.12960 | **0.01063** | 2.50740 | 0.60000 | **0.01117** |
| | B | 0.01860 | 0.00100 | **0.01078** | 0.32940 | 0.12960 | **0.02052** | 2.50740 | 0.60000 | **0.11130** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2b_2 | A_N | 0.01860 | 0.00100 | **0.01689** | 0.32940 | 0.12960 | **0.01838** | 2.50740 | 0.60000 | **0.01857** |
| | B | 0.01860 | 0.00100 | **0.01237** | 0.32940 | 0.12960 | **0.02064** | 2.50740 | 0.60000 | **0.10020** |

**Passive power(pJ) for A_N rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_2** | 0.01860 | **0.01074** | 0.32940 | **0.01871** | 2.50740 | **0.09980** |

**Passive power(pJ) for A_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_2** | 0.01860 | **0.01169** | 0.32940 | **0.02037** | 2.50740 | **0.10069** |

**Passive power(pJ) for A_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_2** | **!B** | 0.01860 | **0.01074** | 0.32940 | **0.01871** | 2.50740 | **0.09980** |

**Passive power(pJ) for A_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand2b_2** | **!B** | 0.01860 | **0.01169** | 0.32940 | **0.02037** | 2.50740 | **0.10069** |

# NAND2x

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | B | Y |
| 0 | x | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nand2_2 | 10.88640 |
| sg13g2_nand2_1 | 7.25760 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | B | Y |
| sg13g2_nand2_2 | 0.00616 | 0.00641 | 0.60000 |
| sg13g2_nand2_1 | 0.00323 | 0.00337 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nand2_2 | 406.16600 | 1419.67000 | 2827.89000 |
| sg13g2_nand2_1 | 203.35200 | 727.00900 | 1458.99000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nand2_2** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.01112** | 0.32940 | 0.12960 | **0.20320** | 2.50740 | 0.60000 | **1.10880** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.01382** | 0.32940 | 0.12960 | **0.20657** | 2.50740 | 0.60000 | **1.11816** |
| **sg13g2_nand2_1** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.01242** | 0.32940 | 0.06480 | **0.20300** | 2.50740 | 0.30000 | **1.10846** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.01476** | 0.32940 | 0.06480 | **0.20616** | 2.50740 | 0.30000 | **1.11726** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nand2_2** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01519** | 0.32940 | 0.12960 | **0.26956** | 2.50740 | 0.60000 | **1.44170** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01735** | 0.32940 | 0.12960 | **0.23864** | 2.50740 | 0.60000 | **1.24086** |
| **sg13g2_nand2_1** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01648** | 0.32940 | 0.06480 | **0.26147** | 2.50740 | 0.30000 | **1.40012** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01786** | 0.32940 | 0.06480 | **0.23043** | 2.50740 | 0.30000 | **1.20061** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2_2 | A | 0.01860 | 0.00100 | **0.00602** | 0.32940 | 0.12960 | **0.01628** | 2.50740 | 0.60000 | **0.10377** |
| | B | 0.01860 | 0.00100 | **0.00712** | 0.32940 | 0.12960 | **0.01723** | 2.50740 | 0.60000 | **0.10976** |
| sg13g2_nand2_1 | A | 0.01860 | 0.00100 | **0.00318** | 0.32940 | 0.06480 | **0.00840** | 2.50740 | 0.30000 | **0.05358** |
| | B | 0.01860 | 0.00100 | **0.00321** | 0.32940 | 0.06480 | **0.00849** | 2.50740 | 0.30000 | **0.05630** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand2_2 | A | 0.01860 | 0.00100 | **0.00792** | 0.32940 | 0.12960 | **0.01633** | 2.50740 | 0.60000 | **0.09470** |
| | B | 0.01860 | 0.00100 | **0.01459** | 0.32940 | 0.12960 | **0.02215** | 2.50740 | 0.60000 | **0.10362** |
| sg13g2_nand2_1 | A | 0.01860 | 0.00100 | **0.00425** | 0.32940 | 0.06480 | **0.00856** | 2.50740 | 0.30000 | **0.04908** |
| | B | 0.01860 | 0.00100 | **0.00771** | 0.32940 | 0.06480 | **0.01161** | 2.50740 | 0.30000 | **0.05374** |

# NAND3B1

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A_N | B | C | Y |
| x | 0 | x | 1 |
| x | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nand3b_1 | 12.70080 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A_N | B | C | Y |
| sg13g2_nand3b_1 | 0.00255 | 0.00337 | 0.00339 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_nand3b_1** | 360.90900 | 1221.39000 | 2342.21000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3b_1 | A_N->Y (RR) | 0.01860 | 0.00100 | **0.02905** | 0.32940 | 0.06480 | **0.15694** | 2.50740 | 0.30000 | **0.58434** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.01624** | 0.32940 | 0.06480 | **0.20727** | 2.50740 | 0.30000 | **1.10849** |
| | C->Y (FR) | 0.01860 | 0.00100 | **0.01768** | 0.32940 | 0.06480 | **0.21014** | 2.50740 | 0.30000 | **1.11560** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3b_1 | A_N->Y (FF) | 0.01860 | 0.00100 | **0.03866** | 0.32940 | 0.06480 | **0.26246** | 2.50740 | 0.30000 | **1.05576** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.02874** | 0.32940 | 0.06480 | **0.30505** | 2.50740 | 0.30000 | **1.55356** |
| | C->Y (RF) | 0.01860 | 0.00100 | **0.03110** | 0.32940 | 0.06480 | **0.27833** | 2.50740 | 0.30000 | **1.35262** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3b_1 | A_N | 0.01860 | 0.00100 | **0.00584** | 0.32940 | 0.06480 | **0.00600** | 2.50740 | 0.30000 | **0.00570** |
| | B | 0.01860 | 0.00100 | **0.00400** | 0.32940 | 0.06480 | **0.00833** | 2.50740 | 0.30000 | **0.04932** |
| | C | 0.01860 | 0.00100 | **0.00442** | 0.32940 | 0.06480 | **0.00881** | 2.50740 | 0.30000 | **0.05246** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3b_1 | A_N | 0.01860 | 0.00100 | **0.01075** | 0.32940 | 0.06480 | **0.01105** | 2.50740 | 0.30000 | **0.00959** |
| | B | 0.01860 | 0.00100 | **0.01013** | 0.32940 | 0.06480 | **0.01281** | 2.50740 | 0.30000 | **0.04799** |
| | C | 0.01860 | 0.00100 | **0.01368** | 0.32940 | 0.06480 | **0.01618** | 2.50740 | 0.30000 | **0.05558** |

**Passive power(pJ) for A_N rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand3b_1** | 0.01860 | **0.00599** | 0.32940 | **0.01570** | 2.50740 | **0.09889** |

**Passive power(pJ) for A_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand3b_1** | 0.01860 | **0.00366** | 0.32940 | **0.01345** | 2.50740 | **0.09582** |

**Passive power(pJ) for A_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand3b_1** | (B * !C) + (!B) | 0.01860 | **0.00599** | 0.32940 | **0.01570** | 2.50740 | **0.09889** |

**Passive power(pJ) for A_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nand3b_1** | **(B \* !C) + (!B)** | 0.01860 | **0.00366** | 0.32940 | **0.01345** | 2.50740 | **0.09582** |

# NAND3

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A | B | C | Y |
| 0 | x | x | 1 |
| 1 | 0 | x | 1 |
| 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_nand3_1** | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A | B | C | Y |
| **sg13g2_nand3_1** | 0.00320 | 0.00337 | 0.00334 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nand3_1 | 207.35200 | 893.00900 | 2188.64000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3_1 | **A->Y (FR)** | 0.01860 | 0.00100 | **0.01436** | 0.32940 | 0.06480 | **0.20432** | 2.50740 | 0.30000 | **1.10033** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.01671** | 0.32940 | 0.06480 | **0.20731** | 2.50740 | 0.30000 | **1.10862** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.01795** | 0.32940 | 0.06480 | **0.21009** | 2.50740 | 0.30000 | **1.11560** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3_1 | **A->Y (RF)** | 0.01860 | 0.00100 | **0.02353** | 0.32940 | 0.06480 | **0.32728** | 2.50740 | 0.30000 | **1.71454** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.02740** | 0.32940 | 0.06480 | **0.30439** | 2.50740 | 0.30000 | **1.55365** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.02900** | 0.32940 | 0.06480 | **0.27647** | 2.50740 | 0.30000 | **1.35210** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3_1 | A | 0.01860 | 0.00100 | **0.00379** | 0.32940 | 0.06480 | **0.00826** | 2.50740 | 0.30000 | **0.04687** |
| | B | 0.01860 | 0.00100 | **0.00396** | 0.32940 | 0.06480 | **0.00833** | 2.50740 | 0.30000 | **0.04931** |
| | C | 0.01860 | 0.00100 | **0.00442** | 0.32940 | 0.06480 | **0.00877** | 2.50740 | 0.30000 | **0.05248** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand3_1 | A | 0.01860 | 0.00100 | **0.00637** | 0.32940 | 0.06480 | **0.00995** | 2.50740 | 0.30000 | **0.04525** |
| | B | 0.01860 | 0.00100 | **0.00995** | 0.32940 | 0.06480 | **0.01282** | 2.50740 | 0.30000 | **0.04852** |
| | C | 0.01860 | 0.00100 | **0.01306** | 0.32940 | 0.06480 | **0.01577** | 2.50740 | 0.30000 | **0.05558** |

# NAND4

## Truth Table

| INPUT | | | | OUTPUT |
|---|---|---|---|---|
| A | B | C | D | Y |
| 0 | x | x | x | 1 |
| 1 | 0 | x | x | 1 |
| 1 | 1 | 0 | x | 1 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_nand4_1** | 10.88640 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|---|---|---|---|---|---|
| | A | B | C | D | Y |
| **sg13g2_nand4_1** | 0.00317 | 0.00332 | 0.00334 | 0.00334 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_nand4_1** | 211.44400 | 1017.88000 | 2918.10000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand4_1 | **A->Y (FR)** | 0.01860 | 0.00100 | **0.01520** | 0.32940 | 0.06480 | **0.20452** | 2.50740 | 0.30000 | **1.09328** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.01762** | 0.32940 | 0.06480 | **0.20781** | 2.50740 | 0.30000 | **1.10018** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.01895** | 0.32940 | 0.06480 | **0.21074** | 2.50740 | 0.30000 | **1.10770** |
| | **D->Y (FR)** | 0.01860 | 0.00100 | **0.01944** | 0.32940 | 0.06480 | **0.21295** | 2.50740 | 0.30000 | **1.11417** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand4_1 | **A->Y (RF)** | 0.01860 | 0.00100 | **0.02907** | 0.32940 | 0.06480 | **0.38781** | 2.50740 | 0.30000 | **2.00604** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.03553** | 0.32940 | 0.06480 | **0.37070** | 2.50740 | 0.30000 | **1.86548** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.03941** | 0.32940 | 0.06480 | **0.34890** | 2.50740 | 0.30000 | **1.68911** |
| | **D->Y (RF)** | 0.01860 | 0.00100 | **0.04092** | 0.32940 | 0.06480 | **0.32992** | 2.50740 | 0.30000 | **1.53110** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand4_1 | A | 0.01860 | 0.00100 | **0.00376** | 0.32940 | 0.06480 | **0.00774** | 2.50740 | 0.30000 | **0.04190** |
| | B | 0.01860 | 0.00100 | **0.00412** | 0.32940 | 0.06480 | **0.00791** | 2.50740 | 0.30000 | **0.04369** |
| | C | 0.01860 | 0.00100 | **0.00450** | 0.32940 | 0.06480 | **0.00816** | 2.50740 | 0.30000 | **0.04616** |
| | D | 0.01860 | 0.00100 | **0.00478** | 0.32940 | 0.06480 | **0.00848** | 2.50740 | 0.30000 | **0.04871** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nand4_1 | A | 0.01860 | 0.00100 | **0.00773** | 0.32940 | 0.06480 | **0.01079** | 2.50740 | 0.30000 | **0.04270** |
| | B | 0.01860 | 0.00100 | **0.01133** | 0.32940 | 0.06480 | **0.01365** | 2.50740 | 0.30000 | **0.04462** |
| | C | 0.01860 | 0.00100 | **0.01455** | 0.32940 | 0.06480 | **0.01657** | 2.50740 | 0.30000 | **0.05016** |
| | D | 0.01860 | 0.00100 | **0.01767** | 0.32940 | 0.06480 | **0.01963** | 2.50740 | 0.30000 | **0.05738** |

# NOR2Bx

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | B_N | Y |
| x | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nor2b_2 | 12.70080 |
| sg13g2_nor2b_1 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | B_N | Y |
| sg13g2_nor2b_2 | 0.00626 | 0.00303 | 0.60000 |
| sg13g2_nor2b_1 | 0.00322 | 0.00258 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nor2b_2 | 1443.41000 | 2040.20000 | 2771.89000 |
| sg13g2_nor2b_1 | 862.05600 | 1172.43000 | 1492.50000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2b_2 | A->Y (FR) | 0.01860 | 0.00100 | **0.01616** | 0.32940 | 0.12960 | **0.29850** | 2.50740 | 0.60000 | **1.60511** |
| | B_N->Y (RR) | 0.01860 | 0.00100 | **0.04036** | 0.32940 | 0.12960 | **0.26125** | 2.50740 | 0.60000 | **0.98714** |
| sg13g2_nor2b_1 | A->Y (FR) | 0.01860 | 0.00100 | **0.01839** | 0.32940 | 0.06480 | **0.29940** | 2.50740 | 0.30000 | **1.60967** |
| | B_N->Y (RR) | 0.01860 | 0.00100 | **0.03652** | 0.32940 | 0.06480 | **0.24532** | 2.50740 | 0.30000 | **0.94837** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2b_2 | A->Y (RF) | 0.01860 | 0.00100 | **0.01109** | 0.32940 | 0.12960 | **0.19774** | 2.50740 | 0.60000 | **1.06154** |
| | B_N->Y (FF) | 0.01860 | 0.00100 | **0.03615** | 0.32940 | 0.12960 | **0.16465** | 2.50740 | 0.60000 | **0.57270** |
| sg13g2_nor2b_1 | A->Y (RF) | 0.01860 | 0.00100 | **0.01207** | 0.32940 | 0.06480 | **0.19146** | 2.50740 | 0.30000 | **1.02695** |
| | B_N->Y (FF) | 0.01860 | 0.00100 | **0.03072** | 0.32940 | 0.06480 | **0.14659** | 2.50740 | 0.30000 | **0.53372** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2b_2 | A | 0.01860 | 0.00100 | **0.00789** | 0.32940 | 0.12960 | **0.01731** | 2.50740 | 0.60000 | **0.10225** |
| | B_N | 0.01860 | 0.00100 | **0.01886** | 0.32940 | 0.12960 | **0.01953** | 2.50740 | 0.60000 | **0.01977** |
| sg13g2_nor2b_1 | A | 0.01860 | 0.00100 | **0.00389** | 0.32940 | 0.06480 | **0.00875** | 2.50740 | 0.30000 | **0.05248** |
| | B_N | 0.01860 | 0.00100 | **0.01046** | 0.32940 | 0.06480 | **0.01064** | 2.50740 | 0.30000 | **0.00977** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2b_2 | A | 0.01860 | 0.00100 | **0.00564** | 0.32940 | 0.12960 | **0.01432** | 2.50740 | 0.60000 | **0.09006** |
| | B_N | 0.01860 | 0.00100 | **0.00878** | 0.32940 | 0.12960 | **0.00929** | 2.50740 | 0.60000 | **0.00819** |
| sg13g2_nor2b_1 | A | 0.01860 | 0.00100 | **0.00347** | 0.32940 | 0.06480 | **0.00772** | 2.50740 | 0.30000 | **0.04632** |
| | B_N | 0.01860 | 0.00100 | **0.00479** | 0.32940 | 0.06480 | **0.00485** | 2.50740 | 0.30000 | **0.00213** |

**Passive power(pJ) for B_N rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nor2b_2** | 0.01860 | **0.01198** | 0.32940 | **0.02188** | 2.50740 | **0.11874** |
| **sg13g2_nor2b_1** | 0.01860 | **0.00607** | 0.32940 | **0.01525** | 2.50740 | **0.09795** |

**Passive power(pJ) for B_N falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nor2b_2** | 0.01860 | **0.01170** | 0.32940 | **0.02212** | 2.50740 | **0.11803** |
| **sg13g2_nor2b_1** | 0.01860 | **0.00673** | 0.32940 | **0.01615** | 2.50740 | **0.09807** |

**Passive power(pJ) for B_N rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor2b_2 | A | 0.01860 | **0.01198** | 0.32940 | **0.02188** | 2.50740 | **0.11874** |
| sg13g2_nor2b_1 | A | 0.01860 | **0.00607** | 0.32940 | **0.01525** | 2.50740 | **0.09795** |

**Passive power(pJ) for B_N falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor2b_2 | A | 0.01860 | **0.01170** | 0.32940 | **0.02212** | 2.50740 | **0.11803** |
| sg13g2_nor2b_1 | A | 0.01860 | **0.00673** | 0.32940 | **0.01615** | 2.50740 | **0.09807** |

# NOR2x

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| **A** | **B** | **Y** |
| 0 | 0 | 1 |
| x | 1 | 0 |
| 1 | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_nor2_2** | 10.88640 |
| **sg13g2_nor2_1** | 7.25760 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | **A** | **B** | **Y** |
| **sg13g2_nor2_2** | 0.00658 | 0.00628 | 0.30000 |
| **sg13g2_nor2_1** | 0.00339 | 0.00322 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_nor2_2 | 834.31500 | 1688.03000 | 2677.84000 |
| sg13g2_nor2_1 | 417.19800 | 844.01900 | 1338.89000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2_2 | A->Y (FR) | 0.01860 | 0.00100 | **0.01974** | 0.32940 | 0.06480 | **0.16760** | 2.50740 | 0.30000 | **0.87565** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.01636** | 0.32940 | 0.06480 | **0.19501** | 2.50740 | 0.30000 | **1.05693** |
| sg13g2_nor2_1 | A->Y (FR) | 0.01860 | 0.00100 | **0.02084** | 0.32940 | 0.06480 | **0.26314** | 2.50740 | 0.30000 | **1.36080** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.01844** | 0.32940 | 0.06480 | **0.29914** | 2.50740 | 0.30000 | **1.60863** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2_2 | A->Y (RF) | 0.01860 | 0.00100 | **0.01352** | 0.32940 | 0.06480 | **0.13260** | 2.50740 | 0.30000 | **0.68074** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.01090** | 0.32940 | 0.06480 | **0.12762** | 2.50740 | 0.30000 | **0.66251** |
| sg13g2_nor2_1 | A->Y (RF) | 0.01860 | 0.00100 | **0.01436** | 0.32940 | 0.06480 | **0.19485** | 2.50740 | 0.30000 | **1.03674** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.01211** | 0.32940 | 0.06480 | **0.19153** | 2.50740 | 0.30000 | **1.02664** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2_2 | A | 0.01860 | 0.00100 | **0.01668** | 0.32940 | 0.06480 | **0.02725** | 2.50740 | 0.30000 | **0.14465** |
| | B | 0.01860 | 0.00100 | **0.00804** | 0.32940 | 0.06480 | **0.02140** | 2.50740 | 0.30000 | **0.13315** |
| sg13g2_nor2_1 | A | 0.01860 | 0.00100 | **0.00824** | 0.32940 | 0.06480 | **0.01208** | 2.50740 | 0.30000 | **0.05720** |
| | B | 0.01860 | 0.00100 | **0.00391** | 0.32940 | 0.06480 | **0.00877** | 2.50740 | 0.30000 | **0.05257** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor2_2 | A | 0.01860 | 0.00100 | **0.00717** | 0.32940 | 0.06480 | **0.01871** | 2.50740 | 0.30000 | **0.13200** |
| | B | 0.01860 | 0.00100 | **0.00564** | 0.32940 | 0.06480 | **0.01716** | 2.50740 | 0.30000 | **0.12028** |
| sg13g2_nor2_1 | A | 0.01860 | 0.00100 | **0.00357** | 0.32940 | 0.06480 | **0.00779** | 2.50740 | 0.30000 | **0.04949** |
| | B | 0.01860 | 0.00100 | **0.00347** | 0.32940 | 0.06480 | **0.00778** | 2.50740 | 0.30000 | **0.04658** |

# NOR3x

*sg13g2_stdcell_fast_1p65V_m40C Cell Library: Process
sg13g2_stdcell_fast_1p65V_m40C, Voltage 1.65, Temp -40.00*

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A | B | C | Y |
| 0 | 0 | 0 | 1 |
| 0 | x | 1 | 0 |
| x | 1 | x | 0 |
| 1 | x | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nor3_2 | 16.32960 |
| sg13g2_nor3_1 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A | B | C | Y |
| sg13g2_nor3_2 | 0.00654 | 0.00644 | 0.00618 | 0.60000 |
| sg13g2_nor3_1 | 0.00344 | 0.00341 | 0.00323 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | **Min.** | **Avg** | **Max.** |
| **sg13g2_nor3_2** | 1251.47000 | 2285.09000 | 3978.83000 |
| **sg13g2_nor3_1** | 628.42700 | 1191.44000 | 2091.28000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nor3_2** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.03350** | 0.32940 | 0.12960 | **0.33923** | 2.50740 | 0.60000 | **1.62946** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.03138** | 0.32940 | 0.12960 | **0.36771** | 2.50740 | 0.60000 | **1.85732** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.02326** | 0.32940 | 0.12960 | **0.39062** | 2.50740 | 0.60000 | **2.05056** |
| **sg13g2_nor3_1** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.03610** | 0.32940 | 0.06480 | **0.33793** | 2.50740 | 0.30000 | **1.62743** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.03403** | 0.32940 | 0.06480 | **0.36582** | 2.50740 | 0.30000 | **1.84790** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.02698** | 0.32940 | 0.06480 | **0.38970** | 2.50740 | 0.30000 | **2.04192** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nor3_2** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01550** | 0.32940 | 0.12960 | **0.19866** | 2.50740 | 0.60000 | **1.03481** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01507** | 0.32940 | 0.12960 | **0.19589** | 2.50740 | 0.60000 | **1.02574** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.01238** | 0.32940 | 0.12960 | **0.19211** | 2.50740 | 0.60000 | **1.01695** |
| **sg13g2_nor3_1** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01625** | 0.32940 | 0.06480 | **0.19343** | 2.50740 | 0.30000 | **1.00555** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01582** | 0.32940 | 0.06480 | **0.19162** | 2.50740 | 0.30000 | **1.00119** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.01352** | 0.32940 | 0.06480 | **0.18824** | 2.50740 | 0.30000 | **0.99315** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|-----------|-------|-----------|-----------|---------|-----------|-----------|---------|-----------|-----------|---------|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor3_2 | A | 0.01860 | 0.00100 | **0.02799** | 0.32940 | 0.12960 | **0.03307** | 2.50740 | 0.60000 | **0.11626** |
| | B | 0.01860 | 0.00100 | **0.02000** | 0.32940 | 0.12960 | **0.02556** | 2.50740 | 0.60000 | **0.09805** |
| | C | 0.01860 | 0.00100 | **0.01118** | 0.32940 | 0.12960 | **0.01950** | 2.50740 | 0.60000 | **0.09246** |
| sg13g2_nor3_1 | A | 0.01860 | 0.00100 | **0.01430** | 0.32940 | 0.06480 | **0.01699** | 2.50740 | 0.30000 | **0.06056** |
| | B | 0.01860 | 0.00100 | **0.01030** | 0.32940 | 0.06480 | **0.01316** | 2.50740 | 0.30000 | **0.05077** |
| | C | 0.01860 | 0.00100 | **0.00596** | 0.32940 | 0.06480 | **0.01022** | 2.50740 | 0.30000 | **0.04795** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|-----------|-------|-----------|-----------|---------|-----------|-----------|---------|-----------|-----------|---------|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor3_2 | A | 0.01860 | 0.00100 | **0.00887** | 0.32940 | 0.12960 | **0.01555** | 2.50740 | 0.60000 | **0.08955** |
| | B | 0.01860 | 0.00100 | **0.00830** | 0.32940 | 0.12960 | **0.01520** | 2.50740 | 0.60000 | **0.08292** |
| | C | 0.01860 | 0.00100 | **0.00643** | 0.32940 | 0.12960 | **0.01401** | 2.50740 | 0.60000 | **0.07865** |
| sg13g2_nor3_1 | A | 0.01860 | 0.00100 | **0.00459** | 0.32940 | 0.06480 | **0.00807** | 2.50740 | 0.30000 | **0.04665** |
| | B | 0.01860 | 0.00100 | **0.00444** | 0.32940 | 0.06480 | **0.00791** | 2.50740 | 0.30000 | **0.04329** |
| | C | 0.01860 | 0.00100 | **0.00393** | 0.32940 | 0.06480 | **0.00766** | 2.50740 | 0.30000 | **0.04168** |

# NOR4x

## Truth Table

| INPUT | | | | OUTPUT |
|---|---|---|---|---|
| A | B | C | D | Y |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | x | 1 | 0 |
| 0 | x | 1 | x | 0 |
| x | 1 | x | x | 0 |
| 1 | x | x | x | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_nor4_2 | 21.77280 |
| sg13g2_nor4_1 | 10.88640 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|---|---|---|---|---|---|
| | A | B | C | D | Y |
| sg13g2_nor4_2 | 0.00657 | 0.00635 | 0.00545 | 0.00549 | 0.60000 |
| sg13g2_nor4_1 | 0.00340 | 0.00333 | 0.00286 | 0.00285 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_nor4_2** | 1430.21000 | 3050.08000 | 5284.73000 |
| **sg13g2_nor4_1** | 715.11300 | 1525.05000 | 2642.39000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nor4_2** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.05172** | 0.32940 | 0.12960 | **0.42966** | 2.50740 | 0.60000 | **1.95030** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.04974** | 0.32940 | 0.12960 | **0.44711** | 2.50740 | 0.60000 | **2.11586** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.04259** | 0.32940 | 0.12960 | **0.46552** | 2.50740 | 0.60000 | **2.30174** |
| | **D->Y (FR)** | 0.01860 | 0.00100 | **0.02969** | 0.32940 | 0.12960 | **0.47929** | 2.50740 | 0.60000 | **2.45987** |
| **sg13g2_nor4_1** | **A->Y (FR)** | 0.01860 | 0.00100 | **0.05389** | 0.32940 | 0.06480 | **0.42533** | 2.50740 | 0.30000 | **1.93807** |
| | **B->Y (FR)** | 0.01860 | 0.00100 | **0.05197** | 0.32940 | 0.06480 | **0.44279** | 2.50740 | 0.30000 | **2.09844** |
| | **C->Y (FR)** | 0.01860 | 0.00100 | **0.04536** | 0.32940 | 0.06480 | **0.46180** | 2.50740 | 0.30000 | **2.28440** |
| | **D->Y (FR)** | 0.01860 | 0.00100 | **0.03313** | 0.32940 | 0.06480 | **0.47580** | 2.50740 | 0.30000 | **2.44097** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| **sg13g2_nor4_2** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01649** | 0.32940 | 0.12960 | **0.20179** | 2.50740 | 0.60000 | **1.03507** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01686** | 0.32940 | 0.12960 | **0.20000** | 2.50740 | 0.60000 | **1.02961** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.01611** | 0.32940 | 0.12960 | **0.19684** | 2.50740 | 0.60000 | **1.02191** |
| | **D->Y (RF)** | 0.01860 | 0.00100 | **0.01348** | 0.32940 | 0.12960 | **0.19285** | 2.50740 | 0.60000 | **1.01205** |
| **sg13g2_nor4_1** | **A->Y (RF)** | 0.01860 | 0.00100 | **0.01754** | 0.32940 | 0.06480 | **0.20172** | 2.50740 | 0.30000 | **1.03472** |
| | **B->Y (RF)** | 0.01860 | 0.00100 | **0.01791** | 0.32940 | 0.06480 | **0.20051** | 2.50740 | 0.30000 | **1.03165** |
| | **C->Y (RF)** | 0.01860 | 0.00100 | **0.01712** | 0.32940 | 0.06480 | **0.19733** | 2.50740 | 0.30000 | **1.02432** |
| | **D->Y (RF)** | 0.01860 | 0.00100 | **0.01458** | 0.32940 | 0.06480 | **0.19376** | 2.50740 | 0.30000 | **1.01679** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor4_2 | A | 0.01860 | 0.00100 | **0.03496** | 0.32940 | 0.12960 | **0.03768** | 2.50740 | 0.60000 | **0.11495** |
| | B | 0.01860 | 0.00100 | **0.03094** | 0.32940 | 0.12960 | **0.03413** | 2.50740 | 0.60000 | **0.10171** |
| | C | 0.01860 | 0.00100 | **0.02304** | 0.32940 | 0.12960 | **0.02719** | 2.50740 | 0.60000 | **0.08877** |
| | D | 0.01860 | 0.00100 | **0.01419** | 0.32940 | 0.12960 | **0.02094** | 2.50740 | 0.60000 | **0.08499** |
| sg13g2_nor4_1 | A | 0.01860 | 0.00100 | **0.01741** | 0.32940 | 0.06480 | **0.01880** | 2.50740 | 0.30000 | **0.05801** |
| | B | 0.01860 | 0.00100 | **0.01519** | 0.32940 | 0.06480 | **0.01683** | 2.50740 | 0.30000 | **0.05096** |
| | C | 0.01860 | 0.00100 | **0.01131** | 0.32940 | 0.06480 | **0.01330** | 2.50740 | 0.30000 | **0.04440** |
| | D | 0.01860 | 0.00100 | **0.00691** | 0.32940 | 0.06480 | **0.01028** | 2.50740 | 0.30000 | **0.04274** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_nor4_2 | A | 0.01860 | 0.00100 | **0.01486** | 0.32940 | 0.12960 | **0.02007** | 2.50740 | 0.60000 | **0.08773** |
| | B | 0.01860 | 0.00100 | **0.01059** | 0.32940 | 0.12960 | **0.01589** | 2.50740 | 0.60000 | **0.07856** |
| | C | 0.01860 | 0.00100 | **0.00885** | 0.32940 | 0.12960 | **0.01487** | 2.50740 | 0.60000 | **0.07362** |
| | D | 0.01860 | 0.00100 | **0.00682** | 0.32940 | 0.12960 | **0.01371** | 2.50740 | 0.60000 | **0.07003** |
| sg13g2_nor4_1 | A | 0.01860 | 0.00100 | **0.00732** | 0.32940 | 0.06480 | **0.01002** | 2.50740 | 0.30000 | **0.04398** |
| | B | 0.01860 | 0.00100 | **0.00553** | 0.32940 | 0.06480 | **0.00825** | 2.50740 | 0.30000 | **0.03965** |
| | C | 0.01860 | 0.00100 | **0.00487** | 0.32940 | 0.06480 | **0.00780** | 2.50740 | 0.30000 | **0.03742** |
| | D | 0.01860 | 0.00100 | **0.00406** | 0.32940 | 0.06480 | **0.00741** | 2.50740 | 0.30000 | **0.03586** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nor4_2** | 0.01860 | **-0.00378** | 0.32940 | **-0.00376** | 2.50740 | **-0.00371** |
| **sg13g2_nor4_1** | 0.01860 | **-0.00172** | 0.32940 | **-0.00171** | 2.50740 | **-0.00168** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00378** | 0.32940 | **0.00376** | 2.50740 | **0.00371** |
| sg13g2_nor4_1 | 0.01860 | **0.00172** | 0.32940 | **0.00171** | 2.50740 | **0.00168** |

**Passive power(pJ) for A rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (!B * C) + (!B * !C * D) | 0.01860 | **-0.00378** | 0.32940 | **-0.00376** | 2.50740 | **-0.00371** |
| sg13g2_nor4_1 | (!B * C) + (!B * !C * D) | 0.01860 | **-0.00172** | 0.32940 | **-0.00171** | 2.50740 | **-0.00168** |

**Passive power(pJ) for A falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (!B * C) + (!B * !C * D) | 0.01860 | **0.00378** | 0.32940 | **0.00376** | 2.50740 | **0.00371** |
| sg13g2_nor4_1 | (!B * C) + (!B * !C * D) | 0.01860 | **0.00172** | 0.32940 | **0.00171** | 2.50740 | **0.00168** |

**Passive power(pJ) for B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_nor4_2 | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_nor4_1 | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_nor4_2** | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_nor4_1** | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

# NP_ANT

## Truth Table

| INPUT |
|:-----:|
| **A** |
| x |

## Footprint

| Cell Name | Area |
|:---------:|:----:|
| **sg13g2_antennanp** | 5.44320 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) |
|:---------:|:-----------:|
|  | **A** |
| **sg13g2_antennanp** | 0.00086 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|:---------:|:----:|:---:|:----:|
|  | **Min.** | **Avg** | **Max.** |
| **sg13g2_antennanp** | 8.16750 | 8.16750 | 8.16750 |

# Passive Power Information

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
| | **Slew(ns)** | **Min** | **Slew(ns)** | **Mid** | **Slew(ns)** | **Max** |
| **sg13g2_antennanp** | 0.01860 | **-0.00068** | 0.32940 | **-0.00068** | 2.50740 | **-0.00068** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|-----------|-----------|-----|-----------|-----|-----------|-----|
| | **Slew(ns)** | **Min** | **Slew(ns)** | **Mid** | **Slew(ns)** | **Max** |
| **sg13g2_antennanp** | 0.01860 | **0.00068** | 0.32940 | **0.00068** | 2.50740 | **0.00068** |

# O21AI

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A1 | A2 | B1 | Y |
| 0 | 0 | x | 1 |
| x | 1 | 0 | 1 |
| x | 1 | 1 | 0 |
| 1 | x | 0 | 1 |
| 1 | x | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_o21ai_1** | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A1 | A2 | B1 | Y |
| **sg13g2_o21ai_1** | 0.00372 | 0.00373 | 0.00335 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_o21ai_1 | 444.88600 | 1609.43000 | 2871.46000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | A1->Y (FR) | 0.01860 | 0.00100 | **0.03458** | 0.32940 | 0.06480 | **0.32053** | 2.50740 | 0.30000 | **1.60127** |
| | A2->Y (FR) | 0.01860 | 0.00100 | **0.03084** | 0.32940 | 0.06480 | **0.35856** | 2.50740 | 0.30000 | **1.88076** |
| | B1->Y (FR) | 0.01860 | 0.00100 | **0.01577** | 0.32940 | 0.06480 | **0.24084** | 2.50740 | 0.30000 | **1.31509** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | A1->Y (RF) | 0.01860 | 0.00100 | **0.02507** | 0.32940 | 0.06480 | **0.23493** | 2.50740 | 0.30000 | **1.15847** |
| | A2->Y (RF) | 0.01860 | 0.00100 | **0.02080** | 0.32940 | 0.06480 | **0.22947** | 2.50740 | 0.30000 | **1.14593** |
| | B1->Y (RF) | 0.01860 | 0.00100 | **0.02256** | 0.32940 | 0.06480 | **0.26878** | 2.50740 | 0.30000 | **1.38891** |

**Delay(ns) to Y rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | B1->Y (FR) | (A1 * !A2) | 0.01860 | 0.00100 | **0.01577** | 0.32940 | 0.06480 | **0.24084** | 2.50740 | 0.30000 | **1.31509** |
| | B1->Y (FR) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01493** | 0.32940 | 0.06480 | **0.23840** | 2.50740 | 0.30000 | **1.31240** |

**Delay(ns) to Y falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | B1->Y (RF) | (A1 * !A2) | 0.01860 | 0.00100 | **0.02256** | 0.32940 | 0.06480 | **0.26878** | 2.50740 | 0.30000 | **1.38891** |
| | B1->Y (RF) | (!A1 * A2) | 0.01860 | 0.00100 | **0.01687** | 0.32940 | 0.06480 | **0.26066** | 2.50740 | 0.30000 | **1.37446** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | A1 | 0.01860 | 0.00100 | **0.00991** | 0.32940 | 0.06480 | **0.01262** | 2.50740 | 0.30000 | **0.05117** |
| | A2 | 0.01860 | 0.00100 | **0.00486** | 0.32940 | 0.06480 | **0.00832** | 2.50740 | 0.30000 | **0.04343** |
| | B1 | 0.01860 | 0.00100 | **0.00185** | 0.32940 | 0.06480 | **0.00662** | 2.50740 | 0.30000 | **0.04894** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | A1 | 0.01860 | 0.00100 | **0.00906** | 0.32940 | 0.06480 | **0.01172** | 2.50740 | 0.30000 | **0.04594** |
| | A2 | 0.01860 | 0.00100 | **0.00857** | 0.32940 | 0.06480 | **0.01176** | 2.50740 | 0.30000 | **0.04374** |
| | B1 | 0.01860 | 0.00100 | **0.00448** | 0.32940 | 0.06480 | **0.00855** | 2.50740 | 0.30000 | **0.04646** |

**Internal switching power(pJ) to Y rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00661** | 0.32940 | 0.06480 | **0.01136** | 2.50740 | 0.30000 | **0.05302** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00185** | 0.32940 | 0.06480 | **0.00662** | 2.50740 | 0.30000 | **0.04894** |

**Internal switching power(pJ) to Y falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_o21ai_1 | B1 | (A1 * !A2) | 0.01860 | 0.00100 | **0.00541** | 0.32940 | 0.06480 | **0.00909** | 2.50740 | 0.30000 | **0.04677** |
| | B1 | (!A1 * A2) | 0.01860 | 0.00100 | **0.00448** | 0.32940 | 0.06480 | **0.00855** | 2.50740 | 0.30000 | **0.04646** |

**Passive power(pJ) for A1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | (!A2 * !B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | (!A2 * !B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_o21ai_1 | (!A1 * !B1) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for A2 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | **(!A1 * !B1)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for B1 rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | 0.01860 | **-0.00017** | 0.32940 | **-0.00013** | 2.50740 | **-0.00013** |

**Passive power(pJ) for B1 falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | 0.01860 | **0.00144** | 0.32940 | **0.00144** | 2.50740 | **0.00145** |

**Passive power(pJ) for B1 rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | **(!A1 * !A2)** | 0.01860 | **-0.00017** | 0.32940 | **-0.00013** | 2.50740 | **-0.00013** |

**Passive power(pJ) for B1 falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_o21ai_1** | **(!A1 * !A2)** | 0.01860 | **0.00144** | 0.32940 | **0.00144** | 2.50740 | **0.00145** |

# OR2x

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | B | X |
| 0 | 0 | 0 |
| x | 1 | 1 |
| 1 | x | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_or2_2 | 10.88640 |
| sg13g2_or2_1 | 9.07200 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | B | X |
| sg13g2_or2_2 | 0.00278 | 0.00258 | 0.60000 |
| sg13g2_or2_1 | 0.00281 | 0.00262 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_or2_2 | 904.48000 | 1261.49000 | 1766.23000 |
| sg13g2_or2_1 | 696.08500 | 922.85700 | 1113.97000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or2_2 | A->X (RR) | 0.01860 | 0.00100 | **0.03586** | 0.32940 | 0.12960 | **0.18307** | 2.50740 | 0.60000 | **0.61480** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.03378** | 0.32940 | 0.12960 | **0.17456** | 2.50740 | 0.60000 | **0.55492** |
| sg13g2_or2_1 | A->X (RR) | 0.01860 | 0.00100 | **0.03032** | 0.32940 | 0.06480 | **0.16263** | 2.50740 | 0.30000 | **0.57057** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.02795** | 0.32940 | 0.06480 | **0.15176** | 2.50740 | 0.30000 | **0.50501** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or2_2 | A->X (FF) | 0.01860 | 0.00100 | **0.05646** | 0.32940 | 0.12960 | **0.19317** | 2.50740 | 0.60000 | **0.64604** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.05438** | 0.32940 | 0.12960 | **0.20986** | 2.50740 | 0.60000 | **0.72484** |
| sg13g2_or2_1 | A->X (FF) | 0.01860 | 0.00100 | **0.04337** | 0.32940 | 0.06480 | **0.16524** | 2.50740 | 0.30000 | **0.59642** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.04119** | 0.32940 | 0.06480 | **0.17722** | 2.50740 | 0.30000 | **0.66527** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or2_2 | A | 0.01860 | 0.00100 | **0.02059** | 0.32940 | 0.12960 | **0.02825** | 2.50740 | 0.60000 | **0.10112** |
| | B | 0.01860 | 0.00100 | **0.02026** | 0.32940 | 0.12960 | **0.02773** | 2.50740 | 0.60000 | **0.09638** |
| sg13g2_or2_1 | A | 0.01860 | 0.00100 | **0.01178** | 0.32940 | 0.06480 | **0.01989** | 2.50740 | 0.30000 | **0.09246** |
| | B | 0.01860 | 0.00100 | **0.01148** | 0.32940 | 0.06480 | **0.01920** | 2.50740 | 0.30000 | **0.08802** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or2_2 | A | 0.01860 | 0.00100 | **0.02667** | 0.32940 | 0.12960 | **0.03020** | 2.50740 | 0.60000 | **0.10107** |
| | B | 0.01860 | 0.00100 | **0.02359** | 0.32940 | 0.12960 | **0.02835** | 2.50740 | 0.60000 | **0.09614** |
| sg13g2_or2_1 | A | 0.01860 | 0.00100 | **0.01517** | 0.32940 | 0.06480 | **0.02222** | 2.50740 | 0.30000 | **0.09373** |
| | B | 0.01860 | 0.00100 | **0.01210** | 0.32940 | 0.06480 | **0.02019** | 2.50740 | 0.30000 | **0.08894** |

# OR3x

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| A | B | C | X |
| 0 | 0 | 0 | 0 |
| 0 | x | 1 | 1 |
| x | 1 | x | 1 |
| 1 | x | x | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_or3_2 | 14.51520 |
| sg13g2_or3_1 | 12.70080 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | A | B | C | X |
| sg13g2_or3_2 | 0.00294 | 0.00287 | 0.00273 | 0.60000 |
| sg13g2_or3_1 | 0.00296 | 0.00289 | 0.00277 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|:---:|:---:|:---:|:---:|
| | Min. | Avg | Max. |
| **sg13g2_or3_2** | 911.99300 | 1393.40000 | 2004.67000 |
| **sg13g2_or3_1** | 703.34600 | 1119.64000 | 1554.38000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or3_2 | A->X (RR) | 0.01860 | 0.00100 | **0.04005** | 0.32940 | 0.12960 | **0.19621** | 2.50740 | 0.60000 | **0.65987** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.03841** | 0.32940 | 0.12960 | **0.18846** | 2.50740 | 0.60000 | **0.60141** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.03558** | 0.32940 | 0.12960 | **0.17897** | 2.50740 | 0.60000 | **0.55157** |
| sg13g2_or3_1 | A->X (RR) | 0.01860 | 0.00100 | **0.03461** | 0.32940 | 0.06480 | **0.17685** | 2.50740 | 0.30000 | **0.61965** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.03309** | 0.32940 | 0.06480 | **0.16811** | 2.50740 | 0.30000 | **0.55496** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.03003** | 0.32940 | 0.06480 | **0.15698** | 2.50740 | 0.30000 | **0.50165** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or3_2 | A->X (FF) | 0.01860 | 0.00100 | **0.07690** | 0.32940 | 0.12960 | **0.20715** | 2.50740 | 0.60000 | **0.64316** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.07463** | 0.32940 | 0.12960 | **0.22346** | 2.50740 | 0.60000 | **0.72950** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.06809** | 0.32940 | 0.12960 | **0.23201** | 2.50740 | 0.60000 | **0.77838** |
| sg13g2_or3_1 | A->X (FF) | 0.01860 | 0.00100 | **0.06037** | 0.32940 | 0.06480 | **0.17841** | 2.50740 | 0.30000 | **0.59757** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.05811** | 0.32940 | 0.06480 | **0.19182** | 2.50740 | 0.30000 | **0.67647** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.05146** | 0.32940 | 0.06480 | **0.19673** | 2.50740 | 0.30000 | **0.71748** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or3_2 | A | 0.01860 | 0.00100 | **0.02157** | 0.32940 | 0.12960 | **0.02858** | 2.50740 | 0.60000 | **0.10589** |
| | B | 0.01860 | 0.00100 | **0.02104** | 0.32940 | 0.12960 | **0.02792** | 2.50740 | 0.60000 | **0.09737** |
| | C | 0.01860 | 0.00100 | **0.02063** | 0.32940 | 0.12960 | **0.02737** | 2.50740 | 0.60000 | **0.09485** |
| sg13g2_or3_1 | A | 0.01860 | 0.00100 | **0.01249** | 0.32940 | 0.06480 | **0.02006** | 2.50740 | 0.30000 | **0.09751** |
| | B | 0.01860 | 0.00100 | **0.01210** | 0.32940 | 0.06480 | **0.01938** | 2.50740 | 0.30000 | **0.08829** |
| | C | 0.01860 | 0.00100 | **0.01179** | 0.32940 | 0.06480 | **0.01899** | 2.50740 | 0.30000 | **0.08648** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or3_2 | A | 0.01860 | 0.00100 | **0.03529** | 0.32940 | 0.12960 | **0.03527** | 2.50740 | 0.60000 | **0.10947** |
| | B | 0.01860 | 0.00100 | **0.03194** | 0.32940 | 0.12960 | **0.03238** | 2.50740 | 0.60000 | **0.09968** |
| | C | 0.01860 | 0.00100 | **0.02809** | 0.32940 | 0.12960 | **0.03022** | 2.50740 | 0.60000 | **0.09653** |
| sg13g2_or3_1 | A | 0.01860 | 0.00100 | **0.02213** | 0.32940 | 0.06480 | **0.02695** | 2.50740 | 0.30000 | **0.10130** |
| | B | 0.01860 | 0.00100 | **0.01856** | 0.32940 | 0.06480 | **0.02414** | 2.50740 | 0.30000 | **0.09231** |
| | C | 0.01860 | 0.00100 | **0.01479** | 0.32940 | 0.06480 | **0.02185** | 2.50740 | 0.30000 | **0.08849** |

# OR4x

## Truth Table

| INPUT | | | | OUTPUT |
|---|---|---|---|---|
| A | B | C | D | X |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | x | 1 | 1 |
| 0 | x | 1 | x | 1 |
| x | 1 | x | x | 1 |
| 1 | x | x | x | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_or4_2 | 16.32960 |
| sg13g2_or4_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|---|---|---|---|---|---|
| | A | B | C | D | X |
| sg13g2_or4_2 | 0.00296 | 0.00292 | 0.00238 | 0.00241 | 0.60000 |
| sg13g2_or4_1 | 0.00297 | 0.00293 | 0.00239 | 0.00243 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_or4_2 | 915.50800 | 1555.85000 | 2202.02000 |
| sg13g2_or4_1 | 707.09900 | 1314.87000 | 1993.61000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or4_2 | A->X (RR) | 0.01860 | 0.00100 | **0.04170** | 0.32940 | 0.12960 | **0.20106** | 2.50740 | 0.60000 | **0.65330** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.04103** | 0.32940 | 0.12960 | **0.19536** | 2.50740 | 0.60000 | **0.60326** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.03911** | 0.32940 | 0.12960 | **0.18775** | 2.50740 | 0.60000 | **0.55643** |
| | D->X (RR) | 0.01860 | 0.00100 | **0.03606** | 0.32940 | 0.12960 | **0.17844** | 2.50740 | 0.60000 | **0.51748** |
| sg13g2_or4_1 | A->X (RR) | 0.01860 | 0.00100 | **0.03617** | 0.32940 | 0.06480 | **0.18266** | 2.50740 | 0.30000 | **0.61393** |
| | B->X (RR) | 0.01860 | 0.00100 | **0.03574** | 0.32940 | 0.06480 | **0.17592** | 2.50740 | 0.30000 | **0.56049** |
| | C->X (RR) | 0.01860 | 0.00100 | **0.03393** | 0.32940 | 0.06480 | **0.16736** | 2.50740 | 0.30000 | **0.50820** |
| | D->X (RR) | 0.01860 | 0.00100 | **0.03071** | 0.32940 | 0.06480 | **0.15662** | 2.50740 | 0.30000 | **0.46351** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or4_2 | A->X (FF) | 0.01860 | 0.00100 | **0.10536** | 0.32940 | 0.12960 | **0.23646** | 2.50740 | 0.60000 | **0.69656** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.10310** | 0.32940 | 0.12960 | **0.24847** | 2.50740 | 0.60000 | **0.77616** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.09643** | 0.32940 | 0.12960 | **0.25930** | 2.50740 | 0.60000 | **0.83528** |
| | D->X (FF) | 0.01860 | 0.00100 | **0.08507** | 0.32940 | 0.12960 | **0.26274** | 2.50740 | 0.60000 | **0.86777** |
| sg13g2_or4_1 | A->X (FF) | 0.01860 | 0.00100 | **0.08322** | 0.32940 | 0.06480 | **0.20273** | 2.50740 | 0.30000 | **0.64880** |
| | B->X (FF) | 0.01860 | 0.00100 | **0.08097** | 0.32940 | 0.06480 | **0.21316** | 2.50740 | 0.30000 | **0.72269** |
| | C->X (FF) | 0.01860 | 0.00100 | **0.07430** | 0.32940 | 0.06480 | **0.22118** | 2.50740 | 0.30000 | **0.77443** |
| | D->X (FF) | 0.01860 | 0.00100 | **0.06279** | 0.32940 | 0.06480 | **0.22172** | 2.50740 | 0.30000 | **0.79991** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or4_2 | A | 0.01860 | 0.00100 | **0.02465** | 0.32940 | 0.12960 | **0.03039** | 2.50740 | 0.60000 | **0.10469** |
| | B | 0.01860 | 0.00100 | **0.02218** | 0.32940 | 0.12960 | **0.02794** | 2.50740 | 0.60000 | **0.09401** |
| | C | 0.01860 | 0.00100 | **0.02134** | 0.32940 | 0.12960 | **0.02729** | 2.50740 | 0.60000 | **0.08705** |
| | D | 0.01860 | 0.00100 | **0.02074** | 0.32940 | 0.12960 | **0.02668** | 2.50740 | 0.60000 | **0.08687** |
| sg13g2_or4_1 | A | 0.01860 | 0.00100 | **0.01540** | 0.32940 | 0.06480 | **0.02187** | 2.50740 | 0.30000 | **0.09566** |
| | B | 0.01860 | 0.00100 | **0.01309** | 0.32940 | 0.06480 | **0.01920** | 2.50740 | 0.30000 | **0.08493** |
| | C | 0.01860 | 0.00100 | **0.01241** | 0.32940 | 0.06480 | **0.01843** | 2.50740 | 0.30000 | **0.07811** |
| | D | 0.01860 | 0.00100 | **0.01193** | 0.32940 | 0.06480 | **0.01822** | 2.50740 | 0.30000 | **0.07762** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_or4_2 | A | 0.01860 | 0.00100 | **0.03940** | 0.32940 | 0.12960 | **0.03417** | 2.50740 | 0.60000 | **0.10552** |
| | B | 0.01860 | 0.00100 | **0.03975** | 0.32940 | 0.12960 | **0.03499** | 2.50740 | 0.60000 | **0.10051** |
| | C | 0.01860 | 0.00100 | **0.03631** | 0.32940 | 0.12960 | **0.03276** | 2.50740 | 0.60000 | **0.09218** |
| | D | 0.01860 | 0.00100 | **0.03241** | 0.32940 | 0.12960 | **0.03038** | 2.50740 | 0.60000 | **0.08916** |
| sg13g2_or4_1 | A | 0.01860 | 0.00100 | **0.02342** | 0.32940 | 0.06480 | **0.02545** | 2.50740 | 0.30000 | **0.09719** |
| | B | 0.01860 | 0.00100 | **0.02362** | 0.32940 | 0.06480 | **0.02632** | 2.50740 | 0.30000 | **0.09256** |
| | C | 0.01860 | 0.00100 | **0.02033** | 0.32940 | 0.06480 | **0.02381** | 2.50740 | 0.30000 | **0.08406** |
| | D | 0.01860 | 0.00100 | **0.01641** | 0.32940 | 0.06480 | **0.02159** | 2.50740 | 0.30000 | **0.08093** |

**Passive power(pJ) for A rising :**

| Cell Name | Power(pJ) | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_or4_2** | 0.01860 | **-0.00199** | 0.32940 | **-0.00206** | 2.50740 | **-0.00209** |
| **sg13g2_or4_1** | 0.01860 | **-0.00200** | 0.32940 | **-0.00206** | 2.50740 | **-0.00210** |

**Passive power(pJ) for A falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00383** | 0.32940 | **0.00381** | 2.50740 | **0.00381** |
| sg13g2_or4_1 | 0.01860 | **0.00383** | 0.32940 | **0.00381** | 2.50740 | **0.00381** |

**Passive power(pJ) for A rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (!B * C) + (!B * !C * D) | 0.01860 | **-0.00199** | 0.32940 | **-0.00206** | 2.50740 | **-0.00209** |
| sg13g2_or4_1 | (!B * C) + (!B * !C * D) | 0.01860 | **-0.00200** | 0.32940 | **-0.00206** | 2.50740 | **-0.00210** |

**Passive power(pJ) for A falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (!B * C) + (!B * !C * D) | 0.01860 | **0.00383** | 0.32940 | **0.00381** | 2.50740 | **0.00381** |
| sg13g2_or4_1 | (!B * C) + (!B * !C * D) | 0.01860 | **0.00383** | 0.32940 | **0.00381** | 2.50740 | **0.00381** |

**Passive power(pJ) for B rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **-0.00005** | 0.32940 | **-0.00005** | 2.50740 | **-0.00005** |
| sg13g2_or4_1 | 0.01860 | **-0.00005** | 0.32940 | **-0.00004** | 2.50740 | **-0.00005** |

**Passive power(pJ) for B falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00005** | 0.32940 | **0.00005** | 2.50740 | **0.00005** |
| sg13g2_or4_1 | 0.01860 | **0.00005** | 0.32940 | **0.00004** | 2.50740 | **0.00005** |

**Passive power(pJ) for B rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (!A * C) + (!A * !C * D) | 0.01860 | **-0.00005** | 0.32940 | **-0.00005** | 2.50740 | **-0.00005** |
| sg13g2_or4_1 | (!A * C) + (!A * !C * D) | 0.01860 | **-0.00005** | 0.32940 | **-0.00004** | 2.50740 | **-0.00005** |

**Passive power(pJ) for B falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00005** | 0.32940 | **0.00005** | 2.50740 | **0.00005** |
| sg13g2_or4_1 | (!A * C) + (!A * !C * D) | 0.01860 | **0.00005** | 0.32940 | **0.00004** | 2.50740 | **0.00005** |

**Passive power(pJ) for C rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for C falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | (A * !D) + (!A * B * !D) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_or4_2 | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| sg13g2_or4_1 | (A * !C) + (!A * B * !C) | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_or4_2** | **(A * !C) + (!A * B * !C)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |
| **sg13g2_or4_1** | **(A * !C) + (!A * B * !C)** | 0.01860 | **0.00000** | 0.32940 | **0.00000** | 2.50740 | **0.00000** |

# SDFRRS

## Truth Table

| INPUT | | | | | | OUTPUT | |
|---|---|---|---|---|---|---|---|
| D | SCD | SCE | RESET_B | SET_B | CLK | Q | Q_N |
| 0 | 0 | x | 1 | 1 | R | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | R | 0 | 1 |
| x | 1 | 1 | 1 | 1 | R | 1 | 0 |
| 1 | x | 0 | 1 | 1 | R | 1 | 0 |
| 1 | 0 | 1 | 1 | 1 | R | 0 | 1 |
| x | x | x | x | 0 | x | 1 | 0 |
| x | x | x | 0 | 1 | x | 0 | 1 |
| x | x | x | 1 | 1 | x | IQ | IQN |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_sdfbbp_1** | 63.50400 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | | | Max Cap(pf) | |
|---|---|---|---|---|---|---|---|---|
| | D | SCD | SCE | RESET_B | SET_B | CLK | Q | Q_N |
| **sg13g2_sdfbbp_1** | 0.00218 | 0.00225 | 0.00396 | 0.00195 | 0.00586 | 0.00341 | 0.30000 | 0.30000 |

# Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_sdfbbp_1 | 5266.21000 | 6701.82000 | 7588.70000 |

# Delay Information

**Delay(ns) to Q rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q (RR) | 0.01860 | 0.00100 | **0.14326** | 0.32940 | 0.06480 | **0.27531** | 2.50740 | 0.30000 | **0.66210** |
| | SET_B->Q (FR) | 0.01860 | 0.00100 | **0.06016** | 0.32940 | 0.06480 | **0.20436** | 2.50740 | 0.30000 | **0.64059** |

**Delay(ns) to Q falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q (RF) | 0.01860 | 0.00100 | **0.12063** | 0.32940 | 0.06480 | **0.24341** | 2.50740 | 0.30000 | **0.59526** |
| | RESET_B->Q (FF) | 0.01860 | 0.00100 | **0.10058** | 0.32940 | 0.06480 | **0.23246** | 2.50740 | 0.30000 | **0.62692** |

**Delay(ns) to Q rising (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q (RR) | SCE | 0.01860 | 0.00100 | **0.14326** | 0.32940 | 0.06480 | **0.27531** | 2.50740 | 0.30000 | **0.66210** |

**Delay(ns) to Q falling (conditional):**

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q (RF) | SCE | 0.01860 | 0.00100 | **0.12063** | 0.32940 | 0.06480 | **0.24341** | 2.50740 | 0.30000 | **0.59526** |

**Delay(ns) to Q_N rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q_N (RR) | 0.01860 | 0.00100 | **0.10013** | 0.32940 | 0.06480 | **0.24526** | 2.50740 | 0.30000 | **0.64553** |
| | RESET_B->Q_N (FR) | 0.01860 | 0.00100 | **0.07940** | 0.32940 | 0.06480 | **0.23781** | 2.50740 | 0.30000 | **0.68413** |

**Delay(ns) to Q_N falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q_N (RF) | 0.01860 | 0.00100 | **0.12072** | 0.32940 | 0.06480 | **0.26034** | 2.50740 | 0.30000 | **0.60379** |
| | SET_B->Q_N (FF) | 0.01860 | 0.00100 | **0.04105** | 0.32940 | 0.06480 | **0.18807** | 2.50740 | 0.30000 | **0.58425** |

## Delay(ns) to Q_N rising (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q_N (RR) | SCE | 0.01860 | 0.00100 | **0.10013** | 0.32940 | 0.06480 | **0.24526** | 2.50740 | 0.30000 | **0.64553** |

## Delay(ns) to Q_N falling (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK->Q_N (RF) | SCE | 0.01860 | 0.00100 | **0.12072** | 0.32940 | 0.06480 | **0.26034** | 2.50740 | 0.30000 | **0.60379** |

# Constraint Information

**Constraints(ns) for D rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.04646** | 1.26300 | 1.26300 | **-0.14841** | 2.50740 | 2.50740 | **-0.20956** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.05624** | 1.26300 | 1.26300 | **0.15920** | 2.50740 | 2.50740 | **0.21841** |

**Constraints(ns) for D falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.04646** | 1.26300 | 1.26300 | **-0.12952** | 2.50740 | 2.50740 | **-0.18004** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.06847** | 1.26300 | 1.26300 | **0.15111** | 2.50740 | 2.50740 | **0.20956** |

**Constraints(ns) for SCD rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.05868** | 1.26300 | 1.26300 | **-0.16190** | 2.50740 | 2.50740 | **-0.22727** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.06847** | 1.26300 | 1.26300 | **0.17000** | 2.50740 | 2.50740 | **0.23612** |

**Constraints(ns) for SCD falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.06113** | 1.26300 | 1.26300 | **-0.12143** | 2.50740 | 2.50740 | **-0.16529** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.08314** | 1.26300 | 1.26300 | **0.14031** | 2.50740 | 2.50740 | **0.19480** |

**Constraints(ns) for SCE rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.04890** | 1.26300 | 1.26300 | **-0.17539** | 2.50740 | 2.50740 | **-0.26564** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.06113** | 1.26300 | 1.26300 | **0.19428** | 2.50740 | 2.50740 | **0.28925** |

**Constraints(ns) for SCE falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | hold | CLK (R) | 0.01860 | 0.01860 | **-0.04646** | 1.26300 | 1.26300 | **-0.07286** | 2.50740 | 2.50740 | **-0.08264** |
| | setup | CLK (R) | 0.01860 | 0.01860 | **0.06847** | 1.26300 | 1.26300 | **0.09444** | 2.50740 | 2.50740 | **0.11216** |

## Constraints(ns) for RESET_B rising :

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | recovery | CLK (R) | 0.01860 | 0.01860 | **0.02934** | 1.26300 | 1.26300 | **0.05127** | 2.50740 | 2.50740 | **0.06198** |
| | removal | CLK (R) | 0.01860 | 0.01860 | **-0.01956** | 1.26300 | 1.26300 | **-0.04048** | 2.50740 | 2.50740 | **-0.04722** |

### Min Pulse Width (ns) for RESET_B:

| Cell Name | High | Low |
|---|---|---|
| sg13g2_sdfbbp_1 | - | 3.3435 |

## Constraints(ns) for SET_B rising :

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_sdfbbp_1 | recovery | CLK (R) | 0.01860 | 0.01860 | **0.00489** | 1.26300 | 1.26300 | **0.09714** | 2.50740 | 2.50740 | **0.26859** |
| | removal | CLK (R) | 0.01860 | 0.01860 | **0.01956** | 1.26300 | 1.26300 | **0.03778** | 2.50740 | 2.50740 | **0.02952** |
| | hold | RESET_B (R) | 0.01860 | 0.01860 | **-0.03668** | 1.26300 | 1.26300 | **-0.12682** | 2.50740 | 2.50740 | **-0.19185** |
| | setup | RESET_B (R) | 0.01860 | 0.01860 | **0.04646** | 1.26300 | 1.26300 | **0.14571** | 2.50740 | 2.50740 | **0.23317** |

### Min Pulse Width (ns) for SET_B:

| Cell Name | High | Low |
|---|---|---|
| sg13g2_sdfbbp_1 | - | 3.3435 |

### Min Pulse Width (ns) for CLK:

| Cell Name | High | Low |
|---|---|---|
| sg13g2_sdfbbp_1 | 3.3435 | 3.3435 |

# Power Information

**Internal switching power(pJ) to Q rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | 0.01860 | 0.00100 | **0.03414** | 0.32940 | 0.06480 | **0.04063** | 2.50740 | 0.30000 | **0.10073** |
| | SET_B | 0.01860 | 0.00100 | **0.06168** | 0.32940 | 0.06480 | **0.16656** | 2.50740 | 0.30000 | **0.63400** |

**Internal switching power(pJ) to Q falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | 0.01860 | 0.00100 | **0.03304** | 0.32940 | 0.06480 | **0.04011** | 2.50740 | 0.30000 | **0.10353** |
| | RESET_B | 0.01860 | 0.00100 | **0.07059** | 0.32940 | 0.06480 | **0.16487** | 2.50740 | 0.30000 | **0.55760** |

**Internal switching power(pJ) to Q rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | SCE | 0.01860 | 0.00100 | **0.03414** | 0.32940 | 0.06480 | **0.04063** | 2.50740 | 0.30000 | **0.10073** |

**Internal switching power(pJ) to Q falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | SCE | 0.01860 | 0.00100 | **0.03304** | 0.32940 | 0.06480 | **0.04011** | 2.50740 | 0.30000 | **0.10353** |

**Internal switching power(pJ) to Q_N rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | 0.01860 | 0.00100 | **0.03267** | 0.32940 | 0.06480 | **0.03985** | 2.50740 | 0.30000 | **0.10350** |
| | RESET_B | 0.01860 | 0.00100 | **0.07055** | 0.32940 | 0.06480 | **0.16498** | 2.50740 | 0.30000 | **0.55802** |

**Internal switching power(pJ) to Q_N falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | 0.01860 | 0.00100 | **0.03414** | 0.32940 | 0.06480 | **0.04060** | 2.50740 | 0.30000 | **0.10042** |
| | SET_B | 0.01860 | 0.00100 | **0.06162** | 0.32940 | 0.06480 | **0.16654** | 2.50740 | 0.30000 | **0.63389** |

**Internal switching power(pJ) to Q_N rising (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | SCE | 0.01860 | 0.00100 | **0.03267** | 0.32940 | 0.06480 | **0.03985** | 2.50740 | 0.30000 | **0.10350** |

**Internal switching power(pJ) to Q_N falling (conditional):**

| Cell Name | Input | When | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_sdfbbp_1 | CLK | SCE | 0.01860 | 0.00100 | **0.03414** | 0.32940 | 0.06480 | **0.04060** | 2.50740 | 0.30000 | **0.10042** |

**Passive power(pJ) for D rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | 0.01860 | **0.00673** | 0.32940 | **0.01060** | 2.50740 | **0.05750** |

**Passive power(pJ) for D falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | 0.01860 | **0.00876** | 0.32940 | **0.01288** | 2.50740 | **0.05912** |

**Passive power(pJ) for D rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | **(!CLK * RESET_B * !SCE * SET_B)** | 0.01860 | **0.02104** | 0.32940 | **0.02578** | 2.50740 | **0.07847** |
| | **(!CLK * RESET_B * !SCE * !SET_B)** | 0.01860 | **0.00673** | 0.32940 | **0.01060** | 2.50740 | **0.05750** |

**Passive power(pJ) for D falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | (!CLK * RESET_B * !SCE * SET_B) | 0.01860 | **0.02227** | 0.32940 | **0.02710** | 2.50740 | **0.07942** |
| | (!CLK * RESET_B * !SCE * !SET_B) | 0.01860 | **0.00876** | 0.32940 | **0.01288** | 2.50740 | **0.05912** |

**Passive power(pJ) for SCD rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.00976** | 0.32940 | **0.01307** | 2.50740 | **0.06180** |

**Passive power(pJ) for SCD falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.00644** | 0.32940 | **0.00991** | 2.50740 | **0.05916** |

**Passive power(pJ) for SCD rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | (!CLK * RESET_B * SCE * SET_B) | 0.01860 | **0.02384** | 0.32940 | **0.02793** | 2.50740 | **0.08192** |
| | (!CLK * RESET_B * SCE * !SET_B) | 0.01860 | **0.00976** | 0.32940 | **0.01307** | 2.50740 | **0.06180** |

**Passive power(pJ) for SCD falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | (!CLK * RESET_B * SCE * SET_B) | 0.01860 | **0.03108** | 0.32940 | **0.03511** | 2.50740 | **0.08969** |
| | (!CLK * RESET_B * SCE * !SET_B) | 0.01860 | **0.00644** | 0.32940 | **0.00991** | 2.50740 | **0.05916** |

**Passive power(pJ) for SCE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.02758** | 0.32940 | **0.03444** | 2.50740 | **0.09984** |

**Passive power(pJ) for SCE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.03782** | 0.32940 | **0.05256** | 2.50740 | **0.11677** |

**Passive power(pJ) for SCE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | (!CLK * D * RESET_B * !SCD * SET_B) | 0.01860 | **0.02159** | 0.32940 | **0.02896** | 2.50740 | **0.09474** |
| | (!CLK * D * RESET_B * !SCD * !SET_B) | 0.01860 | **0.02758** | 0.32940 | **0.03444** | 2.50740 | **0.09984** |
| | (!CLK * !D * RESET_B * SCD * SET_B) | 0.01860 | **0.02315** | 0.32940 | **0.03575** | 2.50740 | **0.15401** |
| | (!CLK * !D * RESET_B * SCD * !SET_B) | 0.01860 | **0.00852** | 0.32940 | **0.02022** | 2.50740 | **0.13231** |

**Passive power(pJ) for SCE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | (!CLK * D * RESET_B * !SCD * SET_B) | 0.01860 | **0.02863** | 0.32940 | **0.03579** | 2.50740 | **0.10012** |
| | (!CLK * D * RESET_B * !SCD * !SET_B) | 0.01860 | **0.03782** | 0.32940 | **0.05256** | 2.50740 | **0.11677** |
| | (!CLK * !D * RESET_B * SCD * SET_B) | 0.01860 | **0.01751** | 0.32940 | **0.06107** | 2.50740 | **0.17642** |
| | (!CLK * !D * RESET_B * SCD * !SET_B) | 0.01860 | **0.00828** | 0.32940 | **0.01934** | 2.50740 | **0.12950** |

**Passive power(pJ) for CLK rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.02225** | 0.32940 | **0.03537** | 2.50740 | **0.15671** |

**Passive power(pJ) for CLK falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_sdfbbp_1** | 0.01860 | **0.02253** | 0.32940 | **0.03614** | 2.50740 | **0.15652** |

**Passive power(pJ) for CLK rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | (RESET_B * SCD * SCE * SET_B * Q * !Q_N) | 0.01860 | **0.01980** | 0.32940 | **0.03290** | 2.50740 | **0.15414** |
| | (RESET_B * !SET_B * Q * !Q_N) | 0.01860 | **0.02425** | 0.32940 | **0.03718** | 2.50740 | **0.15797** |
| | (RESET_B * !SCD * SCE * SET_B * !Q * Q_N) | 0.01860 | **0.01989** | 0.32940 | **0.03297** | 2.50740 | **0.15424** |
| | (D * RESET_B * !SCE * SET_B * Q * !Q_N) | 0.01860 | **0.02692** | 0.32940 | **0.04003** | 2.50740 | **0.16126** |
| | (!RESET_B * !Q * Q_N) | 0.01860 | **0.02225** | 0.32940 | **0.03537** | 2.50740 | **0.15671** |
| | (!D * RESET_B * !SCE * SET_B * !Q * Q_N) | 0.01860 | **0.01986** | 0.32940 | **0.03297** | 2.50740 | **0.15423** |

**Passive power(pJ) for CLK falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_sdfbbp_1 | (RESET_B * SCD * SCE * SET_B * Q * !Q_N) | 0.01860 | **0.02112** | 0.32940 | **0.03479** | 2.50740 | **0.15540** |
| | (RESET_B * SCD * SCE * SET_B * !Q * Q_N) | 0.01860 | **0.03874** | 0.32940 | **0.05266** | 2.50740 | **0.17746** |
| | (RESET_B * !SET_B * Q * !Q_N) | 0.01860 | **0.02072** | 0.32940 | **0.03492** | 2.50740 | **0.15761** |
| | (RESET_B * !SCD * SCE * SET_B * Q * !Q_N) | 0.01860 | **0.04164** | 0.32940 | **0.05588** | 2.50740 | **0.17872** |
| | (RESET_B * !SCD * SCE * SET_B * !Q * Q_N) | 0.01860 | **0.02168** | 0.32940 | **0.03528** | 2.50740 | **0.15566** |
| | (D * RESET_B * !SCE * SET_B * Q * !Q_N) | 0.01860 | **0.02113** | 0.32940 | **0.03479** | 2.50740 | **0.15539** |
| | (!RESET_B * !Q * Q_N) | 0.01860 | **0.02253** | 0.32940 | **0.03614** | 2.50740 | **0.15652** |
| | (!D * RESET_B * !SCE * SET_B * !Q * Q_N) | 0.01860 | **0.02164** | 0.32940 | **0.03527** | 2.50740 | **0.15568** |

# SGCLK

*sg13g2_stdcell_fast_1p65V_m40C Cell Library: Process*
*sg13g2_stdcell_fast_1p65V_m40C, Voltage 1.65, Temp -40.00*

## Truth Table

| INPUT | | | OUTPUT |
|---|---|---|---|
| GATE | SCE | CLK | GCLK |
| x | x | 0 | 0 |
| x | x | 1 | GCLK |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_slgcp_1 | 30.84480 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---|---|---|---|---|
| | GATE | SCE | CLK | GCLK |
| sg13g2_slgcp_1 | 0.00225 | 0.00271 | 0.00571 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_slgcp_1 | 3362.00000 | 3668.47000 | 4067.22000 |

# Delay Information

**Delay(ns) to GCLK rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_slgcp_1 | CLK->GCLK (RR) | 0.01860 | 0.00100 | **0.03702** | 0.32940 | 0.06480 | **0.16455** | 2.50740 | 0.30000 | **0.58758** |

**Delay(ns) to GCLK falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_slgcp_1 | CLK->GCLK (FF) | 0.01860 | 0.00100 | **0.03216** | 0.32940 | 0.06480 | **0.15730** | 2.50740 | 0.30000 | **0.57381** |

# Constraint Information

**Constraints(ns) for GATE rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_slgcp_1 | **hold** | **CLK (R)** | 0.01860 | 0.01860 | **-0.02060** | 1.26300 | 1.26300 | **-0.08635** | 2.50740 | 2.50740 | **-0.11288** |
| | **setup** | **CLK (R)** | 0.01860 | 0.01860 | **0.03161** | 1.26300 | 1.26300 | **0.13492** | 2.50740 | 2.50740 | **0.19295** |

**Constraints(ns) for GATE falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_slgcp_1 | **hold** | **CLK (R)** | 0.01860 | 0.01860 | **-0.02877** | 1.26300 | 1.26300 | **-0.16190** | 2.50740 | 2.50740 | **-0.27296** |
| | **setup** | **CLK (R)** | 0.01860 | 0.01860 | **0.04845** | 1.26300 | 1.26300 | **0.18349** | 2.50740 | 2.50740 | **0.30093** |

**Constraints(ns) for SCE rising :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_slgcp_1 | **hold** | **CLK (R)** | 0.01860 | 0.01860 | **-0.02010** | 1.26300 | 1.26300 | **-0.12143** | 2.50740 | 2.50740 | **-0.18514** |
| | **setup** | **CLK (R)** | 0.01860 | 0.01860 | **0.00200** | 1.26300 | 1.26300 | **0.00200** | 2.50740 | 2.50740 | **0.00200** |

**Constraints(ns) for SCE falling :**

| Cell Name | Timing Check | Ref Pin(trans) | Constraint(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Input Slew(ns) | Ref Slew(ns) | Min | Input Slew(ns) | Ref Slew(ns) | Mid | Input Slew(ns) | Ref Slew(ns) | Max |
| sg13g2_slgcp_1 | **hold** | **CLK (R)** | 0.01860 | 0.01860 | **-0.02847** | 1.26300 | 1.26300 | **-0.11333** | 2.50740 | 2.50740 | **-0.18476** |
| | **setup** | **CLK (R)** | 0.01860 | 0.01860 | **0.05073** | 1.26300 | 1.26300 | **0.13492** | 2.50740 | 2.50740 | **0.21507** |

**Min Pulse Width (ns) for CLK:**

| Cell Name | High | Low |
|---|---|---|
| **sg13g2_slgcp_1** | 3.3435 | 3.3435 |

# Power Information

**Internal switching power(pJ) to GCLK rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_slgcp_1 | CLK | 0.01860 | 0.00100 | **0.02420** | 0.32940 | 0.06480 | **0.03175** | 2.50740 | 0.30000 | **0.11266** |

**Internal switching power(pJ) to GCLK falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_slgcp_1 | CLK | 0.01860 | 0.00100 | **0.01712** | 0.32940 | 0.06480 | **0.02711** | 2.50740 | 0.30000 | **0.10706** |

**Passive power(pJ) for GATE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_slgcp_1** | 0.01860 | **0.03611** | 0.32940 | **0.04493** | 2.50740 | **0.12476** |

**Passive power(pJ) for GATE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_slgcp_1** | 0.01860 | **0.04483** | 0.32940 | **0.06569** | 2.50740 | **0.14531** |

**Passive power(pJ) for GATE rising (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_slgcp_1** | **!CLK** | 0.01860 | **0.03611** | 0.32940 | **0.04493** | 2.50740 | **0.12476** |

**Passive power(pJ) for GATE falling (conditional):**

| Cell Name | When | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| **sg13g2_slgcp_1** | **!CLK** | 0.01860 | **0.04483** | 0.32940 | **0.06569** | 2.50740 | **0.14531** |

**Passive power(pJ) for SCE rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_slgcp_1 | 0.01860 | **0.01647** | 0.32940 | **0.02503** | 2.50740 | **0.10849** |

**Passive power(pJ) for SCE falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_slgcp_1 | 0.01860 | **0.04632** | 0.32940 | **0.06392** | 2.50740 | **0.14516** |

**Passive power(pJ) for CLK rising :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_slgcp_1 | 0.01860 | **0.00733** | 0.32940 | **0.01878** | 2.50740 | **0.12090** |

**Passive power(pJ) for CLK falling :**

| Cell Name | Power(pJ) | | | | | |
|---|---|---|---|---|---|---|
| | Slew(ns) | Min | Slew(ns) | Mid | Slew(ns) | Max |
| sg13g2_slgcp_1 | 0.01860 | **0.00862** | 0.32940 | **0.02091** | 2.50740 | **0.12486** |

# TIE0

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_tielo** | 7.25760 |

## Pin Capacitance Information

| Cell Name | Max Cap(pf) |
|---|---|
| | **L_LO** |
| **sg13g2_tielo** | - |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | **Min.** | **Avg** | **Max.** |
| **sg13g2_tielo** | 1134.26000 | 1134.26000 | 1134.26000 |

# TIE1

## Footprint

| Cell Name | Area |
|-----------|------|
| **sg13g2_tiehi** | 7.25760 |

## Pin Capacitance Information

| Cell Name | Max Cap(pf) |
|-----------|-------------|
|           | **L_HI**    |
| **sg13g2_tiehi** | - |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|-----------|------|-----|------|
|           | **Min.** | **Avg** | **Max.** |
| **sg13g2_tiehi** | 977.89400 | 977.89400 | 977.89400 |

# XNOR2_1

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | B | Y |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

## Footprint

| Cell Name | Area |
|---|---|
| sg13g2_xnor2_1 | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | B | Y |
| sg13g2_xnor2_1 | 0.00641 | 0.00554 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| **sg13g2_xnor2_1** | 683.65600 | 1834.60000 | 2725.61000 |

# Delay Information

**Delay(ns) to Y rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xnor2_1 | A->Y (RR) | 0.01860 | 0.00100 | **0.03677** | 0.32940 | 0.06480 | **0.16475** | 2.50740 | 0.30000 | **0.58858** |
| | A->Y (FR) | 0.01860 | 0.00100 | **0.02692** | 0.32940 | 0.06480 | **0.26958** | 2.50740 | 0.30000 | **1.35793** |
| | B->Y (RR) | 0.01860 | 0.00100 | **0.03489** | 0.32940 | 0.06480 | **0.17184** | 2.50740 | 0.30000 | **0.64008** |
| | B->Y (FR) | 0.01860 | 0.00100 | **0.02452** | 0.32940 | 0.06480 | **0.30521** | 2.50740 | 0.30000 | **1.60627** |

**Delay(ns) to Y falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xnor2_1 | A->Y (FF) | 0.01860 | 0.00100 | **0.03715** | 0.32940 | 0.06480 | **0.21498** | 2.50740 | 0.30000 | **0.81926** |
| | A->Y (RF) | 0.01860 | 0.00100 | **0.02500** | 0.32940 | 0.06480 | **0.23891** | 2.50740 | 0.30000 | **1.20573** |
| | B->Y (FF) | 0.01860 | 0.00100 | **0.03689** | 0.32940 | 0.06480 | **0.20657** | 2.50740 | 0.30000 | **0.77059** |
| | B->Y (RF) | 0.01860 | 0.00100 | **0.02053** | 0.32940 | 0.06480 | **0.23346** | 2.50740 | 0.30000 | **1.18936** |

# Power Information

**Internal switching power(pJ) to Y rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xnor2_1 | A | 0.01860 | 0.00100 | **0.01541** | 0.32940 | 0.06480 | **0.02366** | 2.50740 | 0.30000 | **0.10581** |
| | B | 0.01860 | 0.00100 | **0.01523** | 0.32940 | 0.06480 | **0.02403** | 2.50740 | 0.30000 | **0.10362** |

**Internal switching power(pJ) to Y falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xnor2_1 | A | 0.01860 | 0.00100 | **0.01328** | 0.32940 | 0.06480 | **0.02307** | 2.50740 | 0.30000 | **0.10468** |
| | B | 0.01860 | 0.00100 | **0.01415** | 0.32940 | 0.06480 | **0.02167** | 2.50740 | 0.30000 | **0.10040** |

# XOR2_1

## Truth Table

| INPUT | | OUTPUT |
|---|---|---|
| A | B | X |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

## Footprint

| Cell Name | Area |
|---|---|
| **sg13g2_xor2_1** | 14.51520 |

## Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---|---|---|---|
| | A | B | X |
| **sg13g2_xor2_1** | 0.00662 | 0.00573 | 0.30000 |

## Leakage Information

| Cell Name | Leakage(pW) | | |
|---|---|---|---|
| | Min. | Avg | Max. |
| sg13g2_xor2_1 | 1083.25000 | 1605.39000 | 2318.26000 |

# Delay Information

**Delay(ns) to X rising :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|-----------|-----------------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xor2_1 | **A->X (RR)** | 0.01860 | 0.00100 | **0.03752** | 0.32940 | 0.06480 | **0.25403** | 2.50740 | 0.30000 | **0.97911** |
| | **A->X (FR)** | 0.01860 | 0.00100 | **0.02967** | 0.32940 | 0.06480 | **0.27259** | 2.50740 | 0.30000 | **1.36692** |
| | **B->X (RR)** | 0.01860 | 0.00100 | **0.03799** | 0.32940 | 0.06480 | **0.24417** | 2.50740 | 0.30000 | **0.91324** |
| | **B->X (FR)** | 0.01860 | 0.00100 | **0.02480** | 0.32940 | 0.06480 | **0.26709** | 2.50740 | 0.30000 | **1.35173** |

**Delay(ns) to X falling :**

| Cell Name | Timing Arc(Dir) | Delay(ns) | | | | | | | | |
|-----------|-----------------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xor2_1 | **A->X (FF)** | 0.01860 | 0.00100 | **0.04135** | 0.32940 | 0.06480 | **0.15763** | 2.50740 | 0.30000 | **0.55091** |
| | **A->X (RF)** | 0.01860 | 0.00100 | **0.02365** | 0.32940 | 0.06480 | **0.23695** | 2.50740 | 0.30000 | **1.19798** |
| | **B->X (FF)** | 0.01860 | 0.00100 | **0.03901** | 0.32940 | 0.06480 | **0.16777** | 2.50740 | 0.30000 | **0.61554** |
| | **B->X (RF)** | 0.01860 | 0.00100 | **0.02182** | 0.32940 | 0.06480 | **0.26750** | 2.50740 | 0.30000 | **1.39625** |

# Power Information

**Internal switching power(pJ) to X rising :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xor2_1 | A | 0.01860 | 0.00100 | **0.01317** | 0.32940 | 0.06480 | **0.02204** | 2.50740 | 0.30000 | **0.10315** |
| | B | 0.01860 | 0.00100 | **0.01398** | 0.32940 | 0.06480 | **0.02096** | 2.50740 | 0.30000 | **0.09863** |

**Internal switching power(pJ) to X falling :**

| Cell Name | Input | Power(pJ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Slew(ns) | Load(pf) | Min | Slew(ns) | Load(pf) | Mid | Slew(ns) | Load(pf) | Max |
| sg13g2_xor2_1 | A | 0.01860 | 0.00100 | **0.01678** | 0.32940 | 0.06480 | **0.02496** | 2.50740 | 0.30000 | **0.10474** |
| | B | 0.01860 | 0.00100 | **0.01558** | 0.32940 | 0.06480 | **0.02430** | 2.50740 | 0.30000 | **0.10068** |