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| **PWR\_BOOST\_5P0** | **VCC\_MPU alone** |
| **Power Test Report** | **Measurement Report** |

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| **System Configurations:** | |
| **Model Name** | {{CL\_B1}} |
| **Stage** | {{CL\_B2}} |
| **PCB Version** | {{CL\_B3}} |

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| --- | --- | --- | --- |
| **Contents:** | | | |
|  | [**1. Testing Configurations**](#Configuration) | **Page** | **1** |
|  | [**2. Measurement Results**](#Results)  [**2.1 Regulation at normal temperature**](#A21)  [**2.2 Output Voltage Ripple/Noise**](#_Hlk67307814)  [**2.3 Output Load Transient**](#_Hlk162321883)  [**2.4 Efficiency**](#_Hlk162321883)  [**2.5 Output Voltage Rising Time**](#_Hlk162321883)  [**2.6 Inrush Current**](#_Hlk162321883) | **Page** | **2~3** |
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| **Comments:** | **{{CL\_B3}}** | | |
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| **Prepared by:** | **{{CL\_B5}}** | **Date:** | **{{CL\_B6}}** |
| **Approved by:** |  | **Date:** |  |

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| **1. Testing Configurations** |

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| **1.1 Testing Date:** | {{CL\_B7}} |

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| **1.2 Testing Place:** | {{CL\_B8}} |

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| **1.3 Testing Environment:** | **{{CL\_B9}}** |

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| **1.4 Testing Equipments** | | |
|  | ***Scope:*** | ***{{CL\_C1}}*** |
|  | ***Probe:*** | ***Signal Integrity Analysis:***  ***Agilent 10073D <15pF 1MΩ 100MHz 10X (Passive Probe)***  ***Tektronix P5050 <11.1pF 10MΩ 100MHz 10X (Passive Probe)***  ***Current Measurement:***  ***Tektronix TCP0030A ~120MHz, 30A Max DC(Current Probe)***  ***Tektronix A6302, AM503, TM502A ~50MHz, 20A Max DC, 50A peak pulse (Current Probe)***  ***Tektronix A6303, ~15MHz, 100A Max DC, 100A peak pulse (High Current Probe)*** |
|  | ***Power Supply*** | ***{{CL\_C2}}*** |
|  | ***Electronic Load*** | ***{{CL\_C3}}*** |

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| **1.5 Testing Methodology/Procedure** | |
| **1.Output voltage regulation at normal temperature (static line, load regulation)** | **Measure the output voltages for any combinations of input voltages and load currents.** |
| **2.Output voltage ripple/noise** | **Measure output voltage ripple /noise for any**  **combinations of input voltages and load currents.** |
| **3.Load Transient** | **Measure the output voltages and currents at 0.1Imax~Imax 1KHz dynamic, duty = 1/2, skew rate=1.27A/us.** |
| **4.Output Voltage Rising Time** | **1. Input power at VIN ready.**  **2. Enable the power converter.**  **3. Measure signals input, enable and output by scope.** |
| **5.Efficiency** | **Measure the input voltage, input current and output voltage, output load to calculate power efficiency.** |

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| * 2. Measurement Results |

* **Vin = 3.6V~4.4V, Imin = 100 mA, Imax = 1500mA**

[**2.1 Regulation at normal temperature**](#A21)

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|  | | **Spec.(V)** | **Vrms[V]** | **Vmin[V]** | **Vmax[V]** | | **Comment** |
| **{{CL\_E3}}** | **Imax**  **{{CL\_F3}}A** | **{{CL\_G3}}~{{CL\_H3}}** | **{{CL\_O3}}** | **{{CL\_N3}}** | **{{CL\_M3}}** | | {{CL\_Q3}} |
| **{{CL\_E4}}** | **Imax**  **{{CL\_F4}}A** | **{{CL\_G4}}~{{CL\_H4}}** | **{{CL\_O4}}** | **{{CL\_N4}}** | **{{CL\_M4}}** | | {{CL\_Q4}} |
| **{{CL\_E5}}** | **Imax**  **{{CL\_F5}}A** | **{{CL\_G5}}~{{CL\_H5}}** | **{{CL\_O5}}** | **{{CL\_N4}}** | **{{CL\_M5}}** | | {{CL\_Q5}} |
| **{{CL\_E6}}** | **Imax**  **{{CL\_F6}}A** | **{{CL\_G6}}~{{CL\_H6}}** | **{{CL\_O6}}** | **{{CL\_N6}}** | **{{CL\_M6}}** | | {{CL\_Q6}} |
| **{{CL\_E7}}** | **Imax**  **{{CL\_F7}}A** | **{{CL\_G7}}~{{CL\_H7}}** | **{{CL\_O7}}** | **{{CL\_N7}}** | | **{{CL\_M7}}** | {{CL\_Q7}} |
| **{{CL\_E8}}** | **Imax**  **{{CL\_F8}}A** | **{{CL\_G8}}~{{CL\_H8}}** | **{{CL\_O8}}** | **{{CL\_N8}}** | | **{{CL\_M8}}** | {{CL\_Q8}} |
| **{{CL\_E9}}** | **Imax**  **{{CL\_F9}}A** | **{{CL\_G9}}~{{CL\_H9}}** | **{{CL\_O9}}** | **{{CL\_N9}}** | | **{{CL\_M9}}** | {{CL\_Q9}} |
| **{{CL\_E10}}** | **Imax**  **{{CL\_F10}}A** | **{{CL\_G10}}~{{CL\_H10}}** | **{{CL\_O10}}** | **{{CL\_N10}}** | | **{{CL\_M10}}** | {{CL\_Q10}} |
| **{{CL\_E11}}** | **Imax**  **{{CL\_F11}}A** | **{{CL\_G11}}~{{CL\_H11}}** | **{{CL\_O11}}** | **{{CL\_N11}}** | | **{{CL\_M11}}** | {{CL\_Q11}} |
| **{{CL\_E12}}** | **Imax**  **{{CL\_F12}}A** | **{{CL\_G12}}~{{CL\_H12}}** | **{{CL\_O12}}** | **{{CL\_N12}}** | | **{{CL\_M12}}** | {{CL\_Q12}} |
| **{{CL\_E13}}** | **Imax**  **{{CL\_F13}}A** | **{{CL\_G13}}~{{CL\_H13}}** | **{{CL\_O13}}** | **{{CL\_N13}}** | | **{{CL\_M13}}** | {{CL\_Q13}} |
| **{{CL\_E14}}** | **Imax**  **{{CL\_F14}}A** | **{{CL\_G14}}~{{CL\_H14}}** | **{{CL\_O14}}** | **{{CL\_N14}}** | | **{{CL\_M14}}** | {{CL\_Q14}} |

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| **2.2 Output Voltage Ripple/Noise** | | | | | | |
| Description | | **Spec. (mV)** | | **Measured(V)** | | **Comment** | |
| **Ripple** | **R+N** | **Ripple** | **R+N** |
|  | | | | | | | |
| {{CL\_D3}} | Vin {{CL\_E3}}Vload current = Imax {{CL\_F3}}A | **{{CL\_K3}}** |  | **{{CL\_P3}}** |  | {{CL\_Q3}} | |
| {{CL\_D4}} | Vin {{CL\_E4}}Vload current = Imax {{CL\_F4}}A | **{{CL\_K4}}** |  | **{{CL\_P4}}** |  | {{CL\_Q4}} | |
| {{CL\_D5}} | Vin {{CL\_E5}}Vload current = Imax {{CL\_F5}}A | **{{CL\_K5}}** |  | **{{CL\_P5}}** |  | {{CL\_Q5}} | |
| {{CL\_D6}} | Vin {{CL\_E6}}Vload current = Imax {{CL\_F6}}A | **{{CL\_K6}}** |  | **{{CL\_P6}}** |  | {{CL\_Q6}} | |
| {{CL\_D7}} | Vin {{CL\_E7}}Vload current = Imax {{CL\_F7}}A | **{{CL\_K7}}** |  | **{{CL\_P7}}** |  | {{CL\_Q7}} | |
| {{CL\_D8}} | Vin {{CL\_E8}}Vload current = Imax {{CL\_F8}}A | **{{CL\_K8}}** |  | **{{CL\_P8}}** |  | {{CL\_Q8}} | |
| {{CL\_D9}} | Vin {{CL\_E9}}Vload current = Imax {{CL\_F9}}A | **{{CL\_K9}}** |  | **{{CL\_P9}}** |  | {{CL\_Q9}} | |
| {{CL\_D10}} | Vin {{CL\_E10}}Vload current = Imax {{CL\_F10}}A | **{{CL\_K10}}** |  | **{{CL\_P10}}** |  | {{CL\_Q10}} | |
| {{CL\_D11}} | Vin {{CL\_E11}}Vload current = Imax {{CL\_F11}}A | **{{CL\_K11}}** |  | **{{CL\_P11}}** |  | {{CL\_Q11}} | |
| {{CL\_D12}} | Vin {{CL\_E12}}Vload current = Imax {{CL\_F12}}A | **{{CL\_K12}}** |  | **{{CL\_P12}}** |  | {{CL\_Q12}} | |
| {{CL\_D13}} | Vin {{CL\_E13}}Vload current = Imax {{CL\_F13}}A | **{{CL\_K13}}** |  | **{{CL\_P13}}** |  | {{CL\_Q13}} | |
| {{CL\_D14}} | Vin {{CL\_E14}}Vload current = Imax {{CL\_F14}}A | **{{CL\_K14}}** |  | **{{CL\_P14}}** |  | {{CL\_Q14}} | |

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| **2.3 Load Transient**  **Imin = 100 mA, Imax = 500mA, 1KHz dynamic, duty = 1/2, skew rate=0.25A/us** | | | | | | |
| Description | | **Spec. (V)** | | **Measured(V)** | **Comment** | **Imax** | |
| **Min.** | **Max.** |
| **-20℃** | | | | | | | |
| **{{CL\_S3}}** | Vin = {{CL\_T3}} | **{{CL\_W3}}** | **{{CL\_V3}}** | **{{CL\_Y3}}~{{CL\_X3}}** | {{CL\_AB3}} | **{{CL\_U3}}** | |
| **{{CL\_S4}}** | Vin = {{CL\_T4}} | **{{CL\_W4}}** | **{{CL\_V4}}** | **{{CL\_Y4}}~{{CL\_X4}}** | {{CL\_AB4}} | **{{CL\_U4}}** | |
| **25℃** | | | | | | | |
| **{{CL\_S5}}** | Vin = {{CL\_T5}} | **{{CL\_W5}}** | **{{CL\_V5}}** | **{{CL\_Y5}}~{{CL\_X5}}** | {{CL\_AB5}} | **{{CL\_U5}}** | |
| **{{CL\_S6}}** | Vin = {{CL\_T6}} | **{{CL\_W6}}** | **{{CL\_V6}}** | **{{CL\_Y6}}~{{CL\_X6}}** | {{CL\_AB6}} | **{{CL\_U6}}** | |
| **50℃** | | | | | | | |
| **{{CL\_S7}}** | Vin = {{CL\_T7}} | **{{CL\_W7}}** | **{{CL\_V7}}** | **{{CL\_Y7}}~{{CL\_X7}}** | {{CL\_AB7}} | **{{CL\_U7}}** | |
| **{{CL\_S8}}** | Vin = {{CL\_T8}} | **{{CL\_W8}}** | **{{CL\_V8}}** | **{{CL\_Y8}}~{{CL\_X8}}** | {{CL\_AB8}} | **{{CL\_U8}}** | |

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| **2.4 Line Transient** | | | | | | |
| Description | | **Spec. (V)** | | **Measured(V)** | **Comment** | **Remark** | |
| **Min.** | **Max.** |
| **-20℃** | | | | | | | |
| [**{{CL\_AD3}}**](#B41) | **Vin {{CL\_AE3}}V**  **Imax {{CL\_AF3}}** | **{{CL\_AH3}}** | **{{CL\_AG3}}** | **{{CL\_AJ3}}~{{CL\_AI3}}** | {{CL\_AM3}} |  | |
| [**{{CL\_AD4}}**](#B41) | **Vin {{CL\_AE4}}V**  **Imax {{CL\_AF4}}** | **{{CL\_AH4}}** | **{{CL\_AG4}}** | **{{CL\_AJ4}}~{{CL\_AI4}}** | {{CL\_AM4}} |  | |
| [**{{CL\_AD5}}**](#B41) | **Vin {{CL\_AE5}}V**  **Imax {{CL\_AF5}}** | **{{CL\_AH5}}** | **{{CL\_AG5}}** | **{{CL\_AJ5}}~{{CL\_AI5}}** | {{CL\_AM5}} |  | |
| [**{{CL\_AD6}}**](#B41) | **Vin {{CL\_AE6}}V**  **Imax {{CL\_AF6}}** | **{{CL\_AH6}}** | **{{CL\_AG6}}** | **{{CL\_AJ6}}~{{CL\_AI6}}** | {{CL\_AM6}} |  | |
| **25℃** | | | | | | | |
| [**{{CL\_AD7}}**](#B41) | **Vin {{CL\_AE7}}V**  **Imax {{CL\_AF7}}** | **{{CL\_AH7}}** | **{{CL\_AG7}}** | **{{CL\_AJ7}}~{{CL\_AI7}}** | {{CL\_AM7}} |  | |
| [**{{CL\_AD8}}**](#B41) | **Vin {{CL\_AE8}}V**  **Imax {{CL\_AF8}}** | **{{CL\_AH8}}** | **{{CL\_AG8}}** | **{{CL\_AJ8}}~{{CL\_AI8}}** | {{CL\_AM8}} |  | |
| [**{{CL\_AD9}}**](#B41) | **Vin {{CL\_AE9}}V**  **Imax {{CL\_AF9}}** | **{{CL\_AH9}}** | **{{CL\_AG9}}** | **{{CL\_AJ9}}~{{CL\_AI9}}** | {{CL\_AM9}} |  | |
| [**{{CL\_AD10}}**](#B41) | **Vin {{CL\_AE10}}V**  **Imax {{CL\_AF10}}** | **{{CL\_AH10}}** | **{{CL\_AG10}}** | **{{CL\_AJ10}}~{{CL\_AI10}}** | {{CL\_AM10}} |  | |
| **50℃** | | | | | | | |
| [**{{CL\_AD11}}**](#B41) | **Vin {{CL\_AE11}}V**  **Imax {{CL\_AF11}}** | **{{CL\_AH11}}** | **{{CL\_AG11}}** | **{{CL\_AJ11}}~{{CL\_AI11}}** | {{CL\_AM11}} |  | |
| [**{{CL\_AD12}}**](#B41) | **Vin {{CL\_AE12}}V**  **Imax {{CL\_AF12}}** | **{{CL\_AH12}}** | **{{CL\_AG12}}** | **{{CL\_AJ12}}~{{CL\_AI12}}** | {{CL\_AM12}} |  | |
| [**{{CL\_AD13}}**](#B41) | **Vin {{CL\_AE13}}V**  **Imax {{CL\_AF13}}** | **{{CL\_AH13}}** | **{{CL\_AG13}}** | **{{CL\_AJ13}}~{{CL\_AI13}}** | {{CL\_AM13}} |  | |
| [**{{CL\_AD14}}**](#B41) | **Vin {{CL\_AE14}}V**  **Imax {{CL\_AF14}}** | **{{CL\_AH14}}** | **{{CL\_AG14}}** | **{{CL\_AJ14}}~{{CL\_AI14}}** | {{CL\_AM14}} |  | |

**2.5 Efficiency**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description | **Input** | | **Output** | | **Power Efficiency** |
| **Voltage(V)** | **Current(A)** | **Voltage(V)** | **Current(A)** |
| **-20℃** | | | | | |
| Vin {{CL\_AP3}}V **load current =**  **Imax {{CL\_AQ3}}** | **{{CL\_AR3}}** | **{{CL\_AS3}}** | **{{CL\_AT3}}** | **{{CL\_AU3}}** | **{{CL\_AV3}}** |
| Vin {{CL\_AP4}}V **load current =**  **Imax {{CL\_AQ4}}** | **{{CL\_AR4}}** | **{{CL\_AS4}}** | **{{CL\_AT4}}** | **{{CL\_AU4}}** | **{{CL\_AV4}}** |
| Vin {{CL\_AP5}}V **load current =**  **Imax {{CL\_AQ5}}** | **{{CL\_AR5}}** | **{{CL\_AS5}}** | **{{CL\_AT5}}** | **{{CL\_AU5}}** | **{{CL\_AV5}}** |
| Vin {{CL\_AP6}}V **load current =**  **Imax {{CL\_AQ6}}** | **{{CL\_AR6}}** | **{{CL\_AS6}}** | **{{CL\_AT6}}** | **{{CL\_AU6}}** | **{{CL\_AV6}}** |
| **25℃** | | | | | |
| Vin {{CL\_AP7}}V **load current =**  **Imax {{CL\_AQ7}}** | **{{CL\_AR7}}** | **{{CL\_AS7}}** | **{{CL\_AT7}}** | **{{CL\_AU7}}** | **{{CL\_AV7}}** |
| Vin {{CL\_AP8}}V **load current =**  **Imax {{CL\_AQ8}}** | **{{CL\_AR8}}** | **{{CL\_AS8}}** | **{{CL\_AT8}}** | **{{CL\_AU8}}** | **{{CL\_AV8}}** |
| Vin {{CL\_AP9}}V **load current =**  **Imax {{CL\_AQ9}}** | **{{CL\_AR9}}** | **{{CL\_AS9}}** | **{{CL\_AT9}}** | **{{CL\_AU9}}** | **{{CL\_AV9}}** |
| Vin {{CL\_AP10}}V **load current =**  **Imax {{CL\_AQ10}}** | **{{CL\_AR10}}** | **{{CL\_AS10}}** | **{{CL\_AT10}}** | **{{CL\_AU10}}** | **{{CL\_AV10}}** |
| **50℃** | | | | | |
| Vin {{CL\_AP11}}V **load current =**  **Imax {{CL\_AQ11}}** | **{{CL\_AR11}}** | **{{CL\_AS11}}** | **{{CL\_AT11}}** | **{{CL\_AU11}}** | **{{CL\_AV11}}** |
| Vin {{CL\_AP12}}V **load current =**  **Imax {{CL\_AQ12}}** | **{{CL\_AR12}}** | **{{CL\_AS12}}** | **{{CL\_AT12}}** | **{{CL\_AU12}}** | **{{CL\_AV12}}** |
| Vin {{CL\_AP13}}V **load current =**  **Imax {{CL\_AQ13}}** | **{{CL\_AR13}}** | **{{CL\_AS13}}** | **{{CL\_AT13}}** | **{{CL\_AU13}}** | **{{CL\_AV13}}** |
| Vin {{CL\_AP14}}V **load current =**  **Imax {{CL\_AQ14}}** | **{{CL\_AR14}}** | **{{CL\_AS14}}** | **{{CL\_AT14}}** | **{{CL\_AU14}}** | **{{CL\_AV14}}** |

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| **Waveform#** | **{{image\_1}}** | **Measurement:** |

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| **Waveform#** | **{{image\_2}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_3}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_4}}** | **Measurement:** |

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| **Waveform#** | **{{image\_5}}** | **Measurement:** |

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| **Waveform#** | **{{image\_6}}** | **Measurement:** |

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| **Waveform#** | **{{image\_7}}** | **Measurement:** |

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| **Waveform#** | **{{image\_8}}** | **Measurement:** |

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| **Waveform#** | **{{image\_9}}** | **Measurement:** |

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| **Waveform#** | **{{image\_10}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_11}}** | **Measurement:** |

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| **Waveform#** | **{{image\_12}}** | **Measurement:** |

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| **Waveform#** | **{{image\_13}}** | **Measurement:** |

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| **Waveform#** | **{{image\_14}}** | **Measurement:** |

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| **Waveform#** | **{{image\_15}}** | **Measurement:** |

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| **Waveform#** | **{{image\_16}}** | **Measurement:** |

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| **Waveform#** | **{{image\_17}}** | **Measurement:** |

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| **Waveform#** | **{{image\_18}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_19}}** | **Measurement:** |

|  |  |  |
| --- | --- | --- |
| **Waveform#** | **{{image\_20}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_21}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_22}}** | **Measurement:** |

|  |  |  |
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| **Waveform#** | **{{image\_23}}** | **Measurement:** |

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| **Waveform#** | **{{image\_24}}** | **Measurement:** |

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| **Waveform#** | **{{image\_25}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_26}}** | **Measurement:** |

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| **Waveform#** | **{{image\_27}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_28}}** | **Measurement:** |

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| --- | --- | --- |
| **Waveform#** | **{{image\_29}}** | **Measurement:** |

|  |  |  |
| --- | --- | --- |
| **Waveform#** | **{{image\_30}}** | **Measurement:** |