



| General Data | | | | | |
|--------------|---|---------------|------|-----|-------|
| SYMBOL | DEFINITION | DESCRIPTION | MIN | MAX | NOTES |
| tASR | Row-address setup time before RAS low | to be defined | 0ns | | |
| tASC | Column-address setup time before CAS low | to be defined | 0ns | | |
| tDS | Data setup time | to be defined | 0ns | | |
| tRCS | Read setup time before CAS low | to be defined | | | |
| tCWL | W low setup time before CAS | to be defined | 20ns | | |
| tRWL | W low setup time before RAS | to be defined | | | |
| tWCS | W low setup time before CAS | to be defined | 0ns | | |
| tWSR | W high setup time (CAS-before-RAS refresh only) | to be defined | 10ns | | |
| tCAH | Column-address hold time after CAS low | to be defined | 15ns | | |
| tDHR | Data hold time after RAS low | to be defined | 60ns | | |
| tDH | Data hold time | to be defined | 15ns | | |
| tAR | Column-address hold time after RAS low | to be defined | 60ns | | |
| tRAH | Row-address hold time after RAS low | to be defined | 10ns | | |
| tRCH | Read hold time after CAS high | to be defined | 0ns | | |
| tRRH | Read hold time after RAS high | to be defined | 0ns | | |
| tWCH | Write hold time after CAS low | to be defined | 15ns | | |
| tWCR | Write hold time after RAS low | to be defined | 60ns | | |
| tWHR | W high hold time (CAS-before-RAS refresh only) | to be defined | 10ns | | |
| tCHR | Delay time, RAS low to CAS high | to be defined | 20ns | | |

| General Data continued... | | | | | |
|---------------------------|--|---------------|-------|---------|-------|
| SYMBOL | DEFINITION | DESCRIPTION | MIN | MAX | NOTES |
| tCRP | Delay time, CAS high to RAS low | to be defined | 0ns | | |
| tCSH | Delay time, RAS low to CAS high | to be defined | 80ns | | |
| tCSR | Delay time, CAS low to RAS low | to be defined | 10ns | | |
| tRAD | Delay time, RAS low to column-address | to be defined | 15ns | 40ns | |
| tRAL | Delay time, column-address to RAS high | to be defined | 40ns | | |
| tCAL | Delay time, column-address to CAS high | to be defined | 40ns | | |
| tRCD | Delay time, RAS low to CAS low | to be defined | 20ns | 60ns | |
| tRPC | Delay time, RAS high to CAS low | to be defined | 0ns | | |
| tRSH | Delay time, CAS low to RAS high | to be defined | 20ns | | |
| tT | Transition time | to be defined | 2ns | 50ns | |
| tRAS | Non-page-mode pulse duration, RAS low | to be defined | 80ns | 10000ns | |
| tCAS | Pulse duration, CAS low | to be defined | 20ns | 10000ns | |
| tCLZ | CAS to output in low Z | to be defined | 0ns | | |
| tOFF | output disable time after CAS high | to be defined | 0ns | 20ns | |
| tBufferAndPD | Buffer propagation delays | to be defined | 1.3ns | 15.1ns | |
| tPD | CPLD worst case path | to be defined | | 10ns | |
| tCAC | Access time from CAS low | to be defined | | 20ns | |
| tRAC | Access time from RAS low | to be defined | | 80ns | |
| tRP | Pulse duration, RAS high | to be defined | 60ns | | |

General Data continued...

| SYMBOL | DEFINITION | DESCRIPTION | MIN | MAX | NOTES |
|---------|---------------------------------|---------------|--------|-------|-------|
| t_SMC40 | Data Setup time before NRD | to be defined | 7.5ns | | |
| t_SMC41 | Data Hold time after NRD rising | to be defined | -3.4ns | | |
| t_SMC32 | MCK falling to NRD inactive | to be defined | 4.5ns | 6.8ns | |