



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
tBuffer		to be defined	1.3ns	5.1ns	
t_SMC13	MCK Falling to NWR inactive	to be defined	4.1ns	7.9ns	
t_SMC22	MCK Rising to Data out invalid	to be defined	10.2ns		