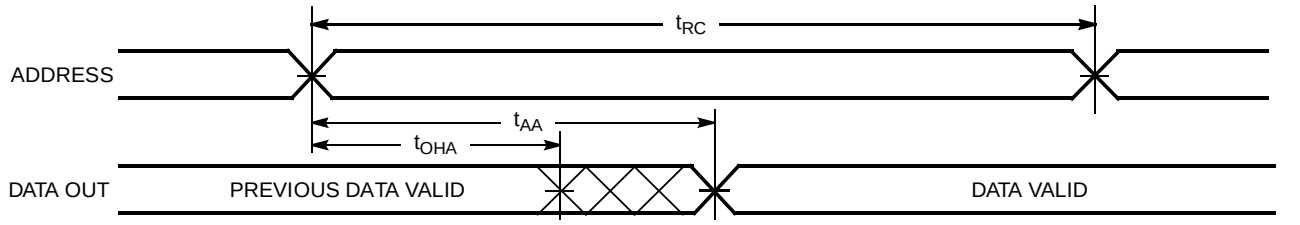
Switching Characteristics Over the Operating Range[3,7] (continued)

Parameter	Description	7C199-20		7C199-25		7C199-35		7C199-45		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
READ CYCLE										
t_{RC}	Read Cycle Time	20		25		35		45		ns
t_{AA}	Address to Data Valid		20		25		35		45	ns
t_{OHA}	Data Hold from Address Change	3		3		3		3		ns
t_{ACE}	$\overline{CE}$ LOW to Data Valid		20		25		35		45	ns
t_{DOE}	$\overline{OE}$ LOW to Data Valid		9		10		16		16	ns
t_{LZOE}	$\overline{OE}$ LOW to Low Z[8]	0		0		0		0		ns
t_{HZOE}	$\overline{OE}$ HIGH to High Z[8,9]		9		11		15		15	ns
t_{LZCE}	$\overline{CE}$ LOW to Low Z[8]	3		3		3		3		ns
t_{HZCE}	$\overline{CE}$ HIGH to High Z[8,9]		9		11		15		15	ns
t_{PU}	$\overline{CE}$ LOW to Power-Up	0		0		0		0		ns
t_{PD}	$\overline{CE}$ HIGH to Power-Down		20		20		20		25	ns
WRITE CYCLE[10,11]										
t_{WC}	Write Cycle Time	20		25		35		45		ns
t_{SCE}	$\overline{CE}$ LOW to Write End	15		18		22		22		ns
t_{AW}	Address Set-Up to Write End	15		20		30		40		ns
t_{HA}	Address Hold from Write End	0		0		0		0		ns
t_{SA}	Address Set-Up to Write Start	0		0		0		0		ns
t_{PWE}	$\overline{WE}$ Pulse Width	15		18		22		22		ns
t_{SD}	Data Set-Up to Write End	10		10		15		15		ns
t_{HD}	Data Hold from Write End	0		0		0		0		ns
t_{HZWE}	$\overline{WE}$ LOW to High Z[9]		10		11		15		15	ns
t_{LZWE}	$\overline{WE}$ HIGH to Low Z[8]	3		3		3		3		ns

Switching Waveforms

Read Cycle No. 1[12, 13]

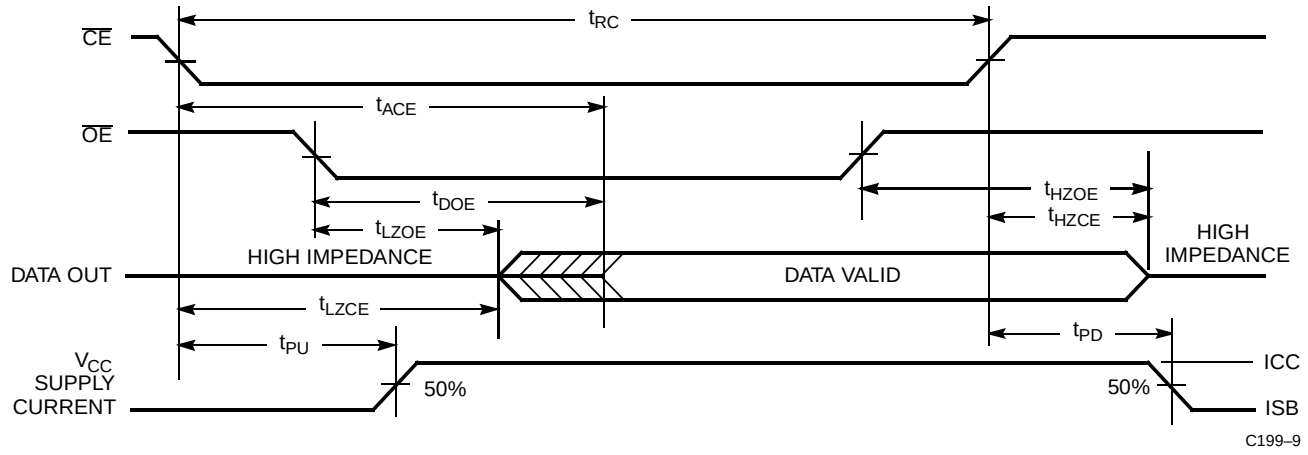


C199–8

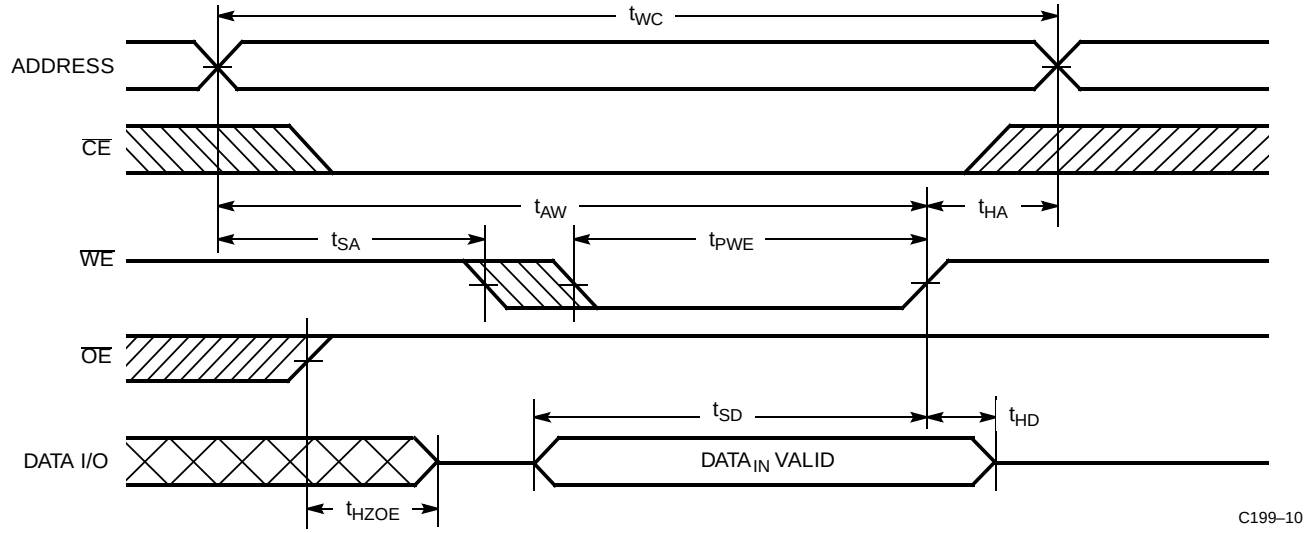
Notes:
12. Device is continuously selected. $\overline{OE}$, $\overline{CE}$ = V_{IL}.
13. $\overline{WE}$ is HIGH for read cycle.

Switching Waveforms (continued)

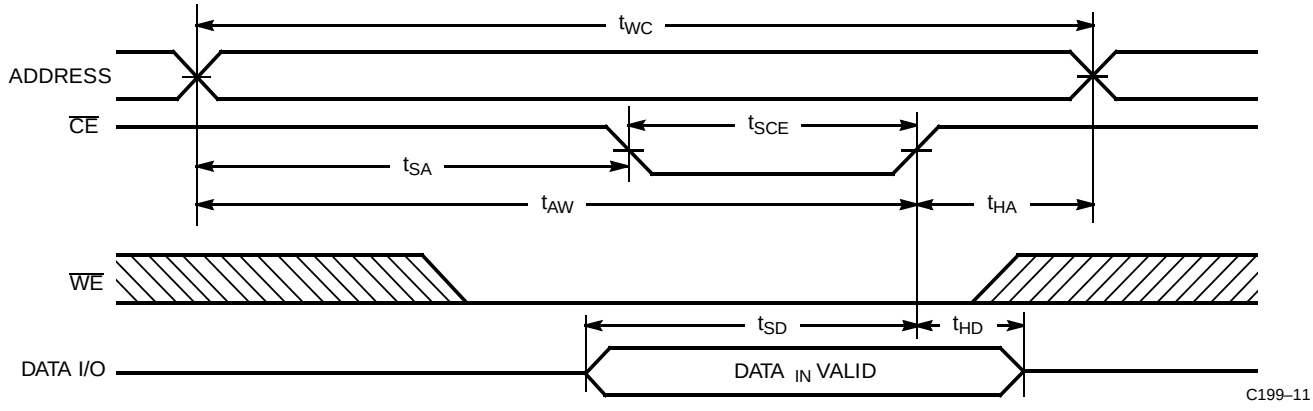
Read Cycle No. 2 [13, 14]



Write Cycle No. 1 (WE Controlled) [10, 15, 16]



Write Cycle No. 2 (CE Controlled) [10, 15, 16]



Notes:
14. Address valid prior to or coincident with $\overline{CE}$ transition LOW.
15. Data I/O is high impedance if $\overline{OE} = V_{IH}$.
16. If $\overline{CE}$ goes HIGH simultaneously with $\overline{WE}$ HIGH, the output remains in a high-impedance state.