

MCP111/112

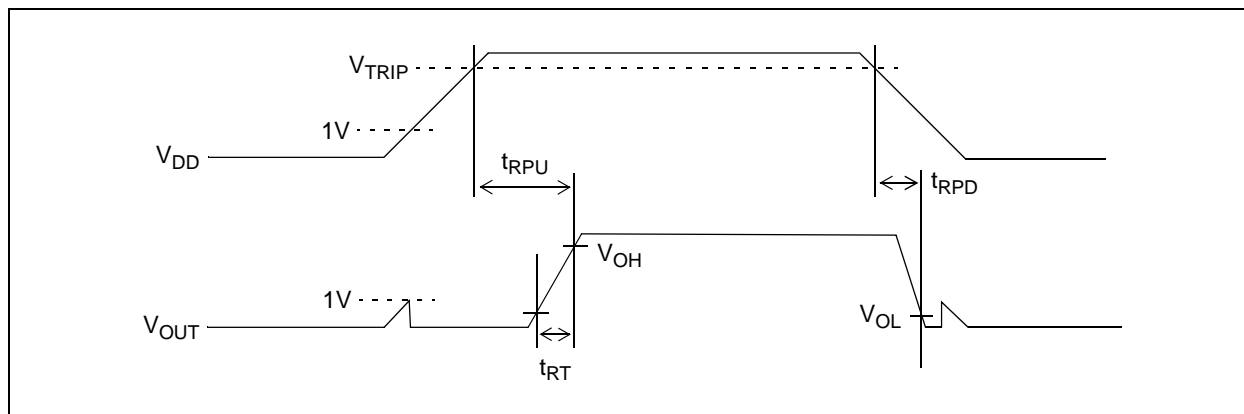


FIGURE 1-1: Timing Diagram.

AC CHARACTERISTICS

Electrical Specifications: Unless otherwise indicated, all limits are specified for $V_{DD} = 1V$ to $5.5V$, $R_{PU} = 100\text{ k}\Omega$ (only **MCP111**), $T_A = -40^\circ\text{C}$ to $+125^\circ\text{C}$.

Parameters	Sym	Min	Typ	Max	Units	Conditions
V_{DD} Detect to V_{OUT} Inactive	t_{RPU}	—	90	—	μs	Figure 1-1 and $C_L = 50\text{ pF}$ (Note 1)
V_{DD} Detect to V_{OUT} Active	t_{RPD}	—	130	—	μs	V_{DD} ramped from $V_{TRIP(MAX)} + 250\text{ mV}$ down to $V_{TRIP(MIN)} - 250\text{ mV}$, per Figure 1-1, $C_L = 50\text{ pF}$ (Note 1)
V_{OUT} Rise Time After V_{OUT} Active	t_{RT}	—	5	—	μs	For V_{OUT} 10% to 90% of final value per Figure 1-1, $C_L = 50\text{ pF}$ (Note 1)

Note 1: These parameters are for design guidance only and are not 100% tested.

TEMPERATURE CHARACTERISTICS

Electrical Specifications: Unless otherwise noted, all limits are specified for $V_{DD} = 1V$ to $5.5V$, $R_{PU} = 100\text{ k}\Omega$ (only **MCP111**), $T_A = -40^\circ\text{C}$ to $+125^\circ\text{C}$.

Parameters	Sym	Min	Typ	Max	Units	Conditions
Temperature Ranges						
Specified Temperature Range	T_A	-40	—	+85	$^\circ\text{C}$	MCP1XX-195
Specified Temperature Range	T_A	-40	—	+125	$^\circ\text{C}$	Except MCP1XX-195
Maximum Junction Temperature	T_J	—	—	+150	$^\circ\text{C}$	
Storage Temperature Range	T_A	-65	—	+150	$^\circ\text{C}$	
Package Thermal Resistances						
Thermal Resistance, 3L-SOT23	θ_{JA}	—	336	—	$^\circ\text{C/W}$	
Thermal Resistance, 3L-SC-70	θ_{JA}	—	340	—	$^\circ\text{C/W}$	
Thermal Resistance, 3L-TO-92	θ_{JA}	—	131.9	—	$^\circ\text{C/W}$	
Thermal Resistance, 3L-SOT-89	θ_{JA}	—	110	—	$^\circ\text{C/W}$	