DC CHARACTERISTICS (CONTINUED)

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

Parameters		Sym	Min	Typ	Max	Units	Conditions
Threshold Hysteresis (min. = 1%, max = 6%)	**MCP1XX-195**	V_{HYS}	0.019	—	0.114	V	T_A = +25°C
	MCP1XX-240		0.023	—	0.139	V	
	MCP1XX-270		0.026	—	0.158	V	
	MCP1XX-290		0.029	—	0.174	V	
	MCP1XX-300		0.029	—	0.176	V	
	MCP1XX-315		0.031	—	0.185	V	
	MCP1XX-450		0.044	—	0.263	V	
	MCP1XX-475		0.046	—	0.278	V	
V_{OUT} Low-level Output Voltage		V_{OL}	—	—	0.4	V	I_{OL} = 500 µA, V_{DD} = $V_{TRIP(MIN)}$
V_{OUT} High-level Output Voltage		V_{OH}	V_{DD} – 0.6	—	—	V	I_{OH} = 1 mA, For only **MCP112** (push-pull output)
Open-drain High Voltage on Output		V_{ODH}	—	—	13.5 **(3)**	V	**MCP111** only, V_{DD} = 3.0V, Time voltage > 5.5V applied ≤ 100s, current into pin limited to 2 mA, +25°C operation recommended **Note 3, Note 4**
Open-drain Output Leakage Current (**MCP111** only)		I_{OD}	—	0.1	—	µA	

Note 1: Trip point is ±1.5% from typical value.

2: Trip point is ±2.5% from typical value.

3: This specification allows this device to be used in PICmicro® microcontroller applications that require the In-Circuit Serial Programming™ (ICSP™) feature (see device-specific programming specifications for voltage requirements). This specification DOES NOT allow a continuous high voltage to be present on the open-drain output pin (V_{OUT}). The total time that the V_{OUT} pin can be above the maximum device operational voltage (5.5V) is 100 sec. Current into the V_{OUT} pin should be limited to 2 mA. It is recommended that the device operational temperature be maintained between 0°C to 70°C (+25°C preferred). For additional information, please refer to Figure 2-28.

4: This parameter is established by characterization and is not 100% tested.