



SSI

DM54/DM7460 Expanders

**Electrical Characteristics** over recommended operating free-air temperature range (unless otherwise noted)

Parameter		Conditions	DM54			Conditions	DM74			Units		
			60				60					
			Min	Typ (1)	Max		Min	Typ (1)	Max			
V <sub>IH</sub>	High Level Input Voltage		2				2			V		
V <sub>IL</sub>	Low Level Input Voltage			0.8					0.8	V		
V <sub>XX(ON)</sub>	On-State Voltage Between Expander Outputs	V <sub>CC</sub> = 4.5 V V <sub>IH</sub> = 2 V V <sub>X</sub> = 1.1 V I <sub>X</sub> = 3.5 mA T <sub>A</sub> = -55°C		0.4		V <sub>CC</sub> = 4.75 V V <sub>IH</sub> = 2 V V <sub>X</sub> = 1 V I <sub>X</sub> = 3.5 mA T <sub>A</sub> = 0°C			0.4	V		
I <sub>X(ON)</sub>	On-State Expander Current	V <sub>CC</sub> = 4.5 V V <sub>IH</sub> = 2 V V <sub>X</sub> = 1.1 V I <sub>X</sub> = 0 T <sub>A</sub> = -55°C	-0.3			V <sub>CC</sub> = 4.75 V V <sub>IH</sub> = 2 V V <sub>X</sub> = 1 V I <sub>X</sub> = 0 T <sub>A</sub> = 0°C	-0.43			mA		
I <sub>X(OFF)</sub>	Off-State Expander Current	V <sub>CC</sub> = 4.5 V V <sub>IL</sub> = 0.8 V V <sub>X</sub> = 4.5 V R <sub>X</sub> = 1.2 kΩ T <sub>A</sub> = -55°C		150		V <sub>CC</sub> = 4.75 V V <sub>IL</sub> = 0.8 V V <sub>X</sub> = 4.5 V R <sub>X</sub> = 1.2 kΩ T <sub>A</sub> = 0°C			270	μA		
I <sub>I</sub>	Input Current at Maximum Input Voltage	V <sub>CC</sub> = 5.5 V V <sub>I</sub> = 5.5 V		1		V <sub>CC</sub> = 5.25 V V <sub>I</sub> = 5.5 V			1	mA		
I <sub>IH</sub>	High Level Input Current	V <sub>CC</sub> = 5.5 V V <sub>I</sub> = 2.4 V		40		V <sub>CC</sub> = 5.25 V V <sub>I</sub> = 2.4 V			40	μA		
I <sub>IL</sub>	Low Level Input Current	V <sub>CC</sub> = 5.5 V V <sub>I</sub> = 0.4 V		-1.6		V <sub>CC</sub> = 5.25 V V <sub>I</sub> = 0.4 V			-1.6	mA		
I <sub>CC(ON)</sub>	Supply Current, Expander On	V <sub>CC</sub> = 5.5 V V <sub>I</sub> = 4.5 V V <sub>X</sub> = 0.85 V I <sub>X</sub> = 0		1.2	2.5	V <sub>CC</sub> = 5.25 V V <sub>I</sub> = 4.5 V V <sub>X</sub> = 0.85 V I <sub>X</sub> = 0			1.2	mA		
I <sub>CC(OFF)</sub>	Supply Current, Expander Off	V <sub>CC</sub> = 5.5 V V <sub>I</sub> = 0 V <sub>X</sub> = 0.85 V I <sub>X</sub> = 0		2	4	V <sub>CC</sub> = 5.25 V V <sub>I</sub> = 0 V <sub>X</sub> = 0.85 V I <sub>X</sub> = 0			2	mA		

Note 1: All typical values are at V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C.