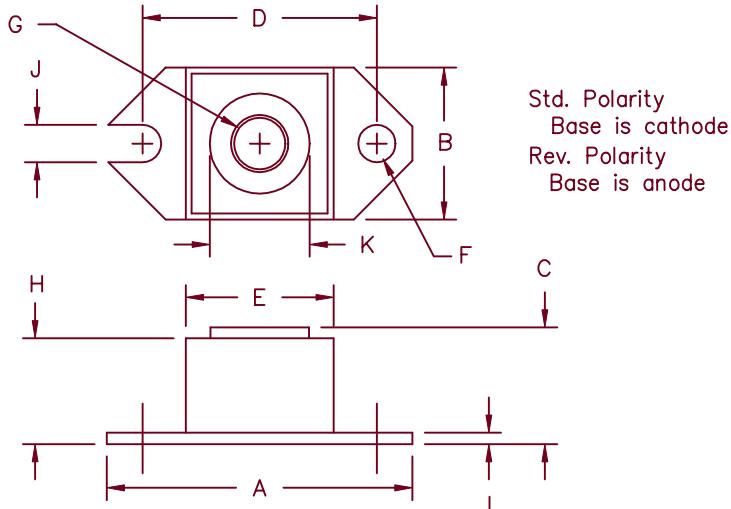


# 240 Amp Schottky Rectifier

## HS24380 - HS243100



Microsemi Catalog Number	Industry Part Number	Working Reverse Voltage	Peak Reverse Voltage	Repetitive Peak Reverse Voltage
HS24380*	243NQ080	80V	80V	
HS24390*	MBR24080	90V	90V	
HS243100*	243NQ100	100V	100V	

\*Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- 240 Amperes/80 to 100 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

### Electrical Characteristics

Average forward current	I <sub>F(AV)</sub>	240 Amps	T <sub>C</sub> = 122°C, Square wave, R <sub>θJC</sub> = .24°C/W
Maximum surge current	I <sub>FSM</sub>	3300 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Maximum repetitive reverse current	I <sub>R(OV)</sub>	2 Amps	f = 1 KHZ, 25°C
Max peak forward voltage	V <sub>FM</sub>	0.72 Volts	I <sub>FM</sub> = 240A: T <sub>J</sub> = 175°C*
Max peak forward voltage	V <sub>FM</sub>	0.86 Volts	I <sub>FM</sub> = 240A: T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub>	200mA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current	I <sub>RM</sub>	8.0mA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub>	6400pF	V <sub>R</sub> = 5.0V, T <sub>C</sub> = 25°C

\*Pulse test: Pulse width 300 usec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance	R <sub>θJC</sub>	0.24°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.12°C/W Case to sink
Terminal Torque		35–40 inch pounds
Mounting Base Torque		20–25 inch pounds
Weight		1.1 ounces (32 grams) typical

# HS24380 – HS243100

Figure 1  
Typical Forward Characteristics

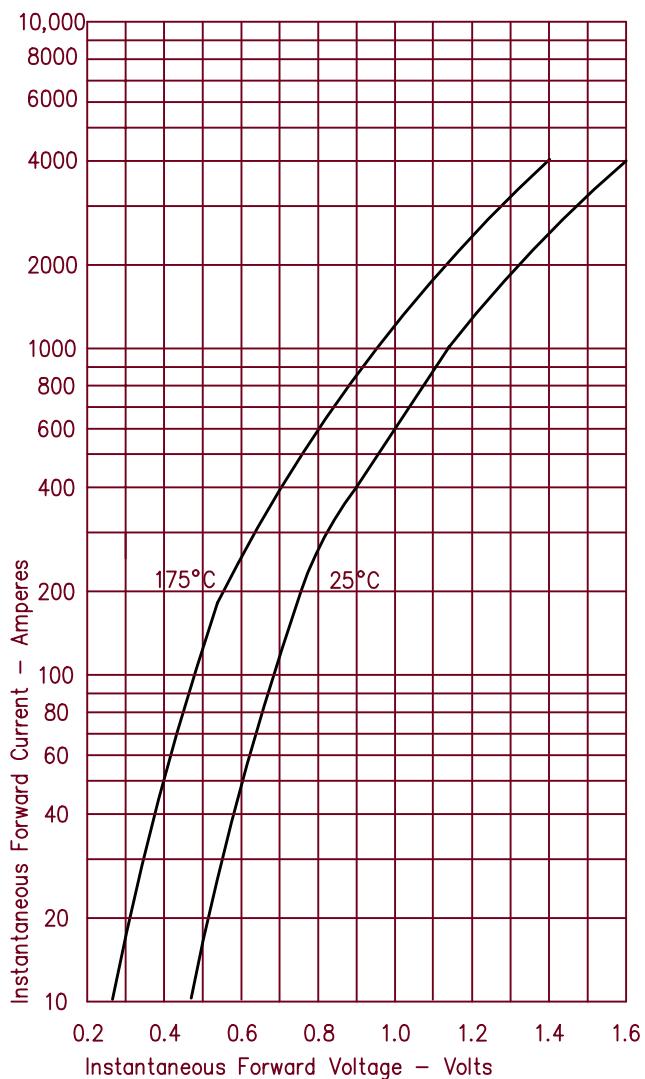


Figure 2  
Typical Reverse Characteristics

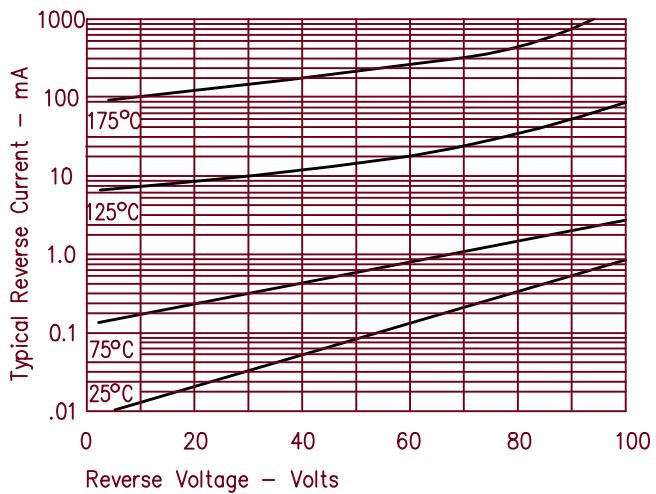


Figure 3  
Typical Junction Capacitance

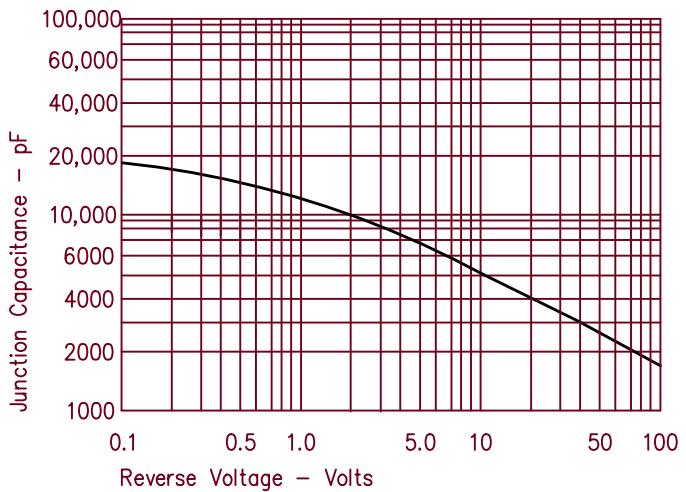


Figure 4  
Forward Current Derating

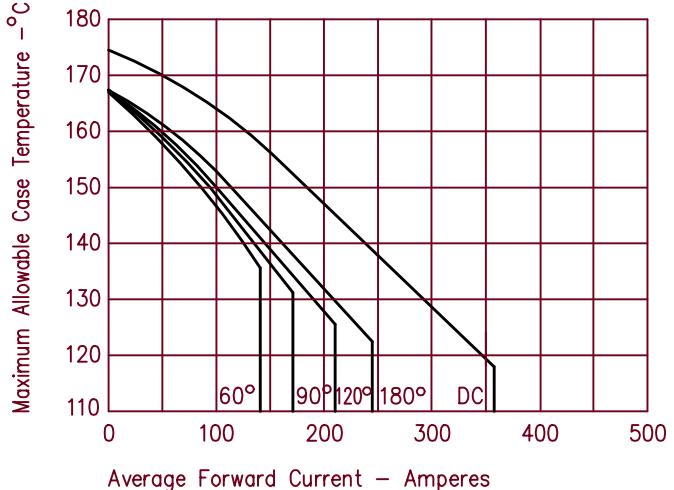


Figure 5  
Maximum Forward Power Dissipation

