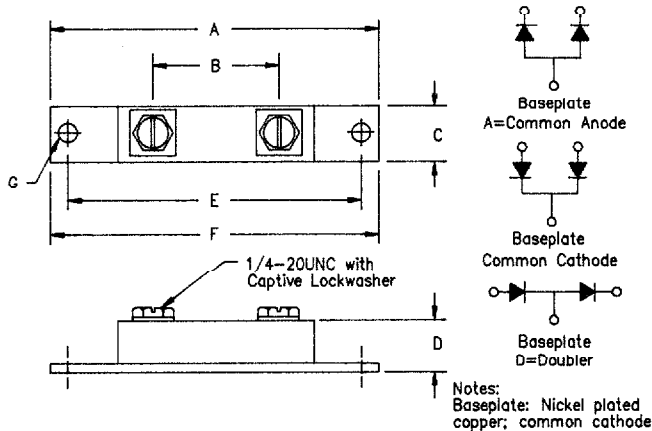


# Schottky PowerMod

## FST30035 — FST30050



Dim. Inches		Millimeters		Notes
Min.	Max.	Min.	Max.	
A	---	2.450	---	62.23
B	1.350	1.400	34.29	35.56
C	0.700	0.800	17.78	20.32
D	---	0.625	---	15.88
E	3.140	3.160	79.76	80.26
F	---	3.650	---	92.71
G	0.280	0.300	7.140	7.670 Dia.

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST30035*	35V	35V
FST30040*	40V	40V
FST30045*	45V	45V
FST30050*	50V	50V

\*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- Common Cathode Center Tap
- 300 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

### Electrical Characteristics

Average forward current per pkg	IF(AV) 300 Amps	TC = 136°C, Square wave, R <sub>θJC</sub> = 0.20°C/W
Average forward current per leg	IF(AV) 150 Amps	TC = 136°C, Square wave, R <sub>θJC</sub> = 0.40°C/W
Maximum surge current per leg	IFSM 2000 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Maximum repetitive reverse current per leg	IR(OV) 2 Amps	f = 1 KHZ, 25°C
Max peak forward voltage per leg	VFM 0.70 Volts	IFM = 200A; T <sub>J</sub> = 125°C*
Max peak forward voltage per leg	VFM 0.76 Volts	IFM = 200A; T <sub>J</sub> = 25°C*
Max peak reverse current per leg	IRM 75 mA	VRRM, T <sub>J</sub> = 125°C*
Max peak reverse current per leg	IRM 4.0 mA	VRRM, T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub> 4600 pF	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>	-40°C to 175°C
Operating junction temp range	T <sub>J</sub>	-40°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	0.40°C/W Junction to case
Typical thermal resistance	R <sub>θCS</sub>	0.08°C/W Case to sink
Terminal Torque		50 inch pounds maximum
Mounting Base Torque		40 inch pounds maximum
Weight		2.8 ounces (75 grams) typical

**Microsemi Corp.**  
**Colorado**

# FST30035 — FST30050



Figure 1  
Typical Forward Characteristics - Per Leg

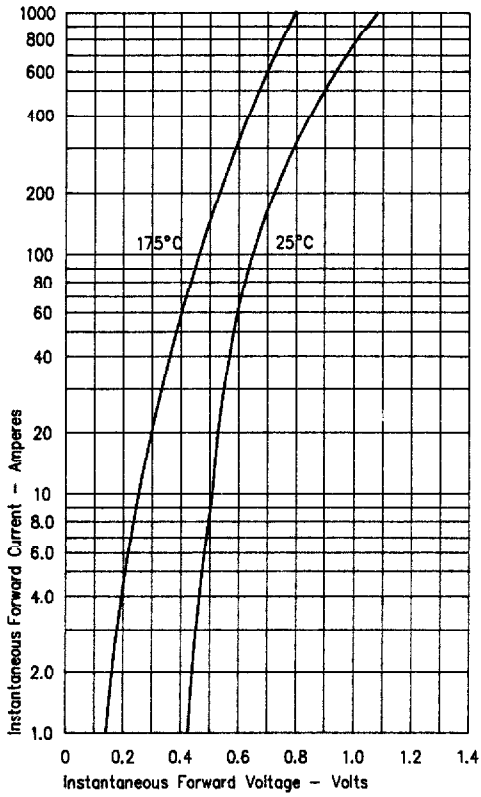


Figure 3  
Typical Junction Capacitance - Per Leg

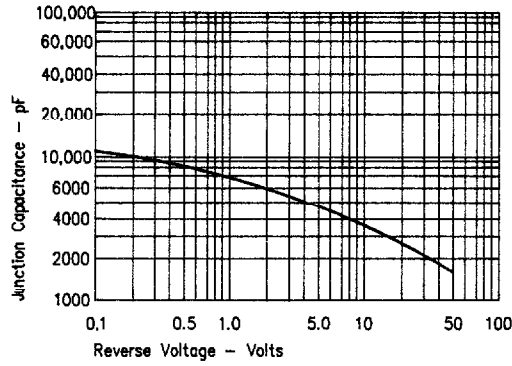


Figure 4  
Forward Current Derating - Per Leg

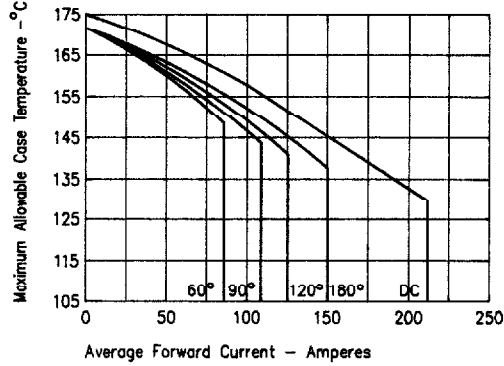


Figure 2  
Typical Reverse Characteristics - Per Leg

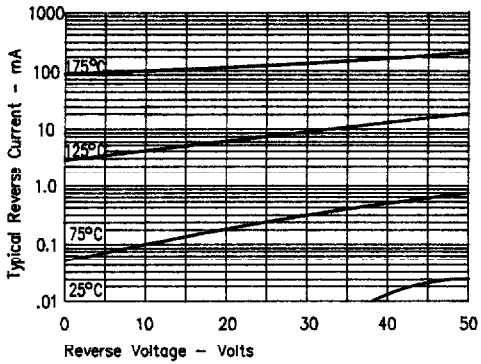


Figure 5  
Maximum Forward Power Dissipation - Per Leg

