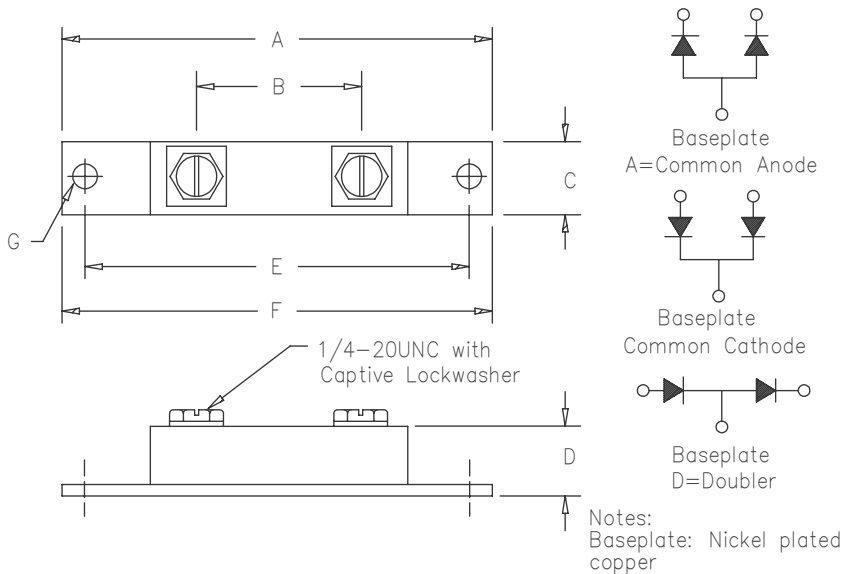


Schottky PowerMod

FST20035 — FST20050



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.

TO-244AB

Notes:
Baseplate: Nickel plated copper

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST20035*	35V	35V
FST20040*	40V	40V
FST20045*	45V	45V
FST20050*	50V	50V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 200 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 200 Amps	$T_C = 143^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.25^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 100 Amps	$T_C = 143^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.50^\circ\text{C/W}$
Maximum surge current per leg	I_{FSM} 2000 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum repetitive reverse current per leg	$I_{R(OV)}$ 2 Amps	$f = 1 \text{ KHZ}$, 25°C , $1\mu\text{sec}$ square wave
Max peak forward voltage per leg	V_{FM} 0.80 Volts	$I_{FM} = 200\text{A}; T_J = 25^\circ\text{C}^*$
Max peak forward voltage per leg	V_{FM} 0.60 Volts	$I_{FM} = 200\text{A}; T_J = 175^\circ\text{C}^*$
Max peak reverse current per leg	I_{RM} 75 mA	$V_{RRM}, T_J = 125^\circ\text{C}^*$
Max peak reverse current per leg	I_{RM} 4.0 mA	$V_{RRM}, T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	C_J 4600 pF	$V_R = 5.0\text{V}, T_C = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	0.05°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.25°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.08°C/W Case to sink
Terminal Torque		35-50 inch pounds
Mounting Base Torque		30-40 inch pounds
Weight		3.4 ounces (95 grams) typical

FST20035 – FST20050

Figure 1
Typical Forward Characteristics – Per Leg

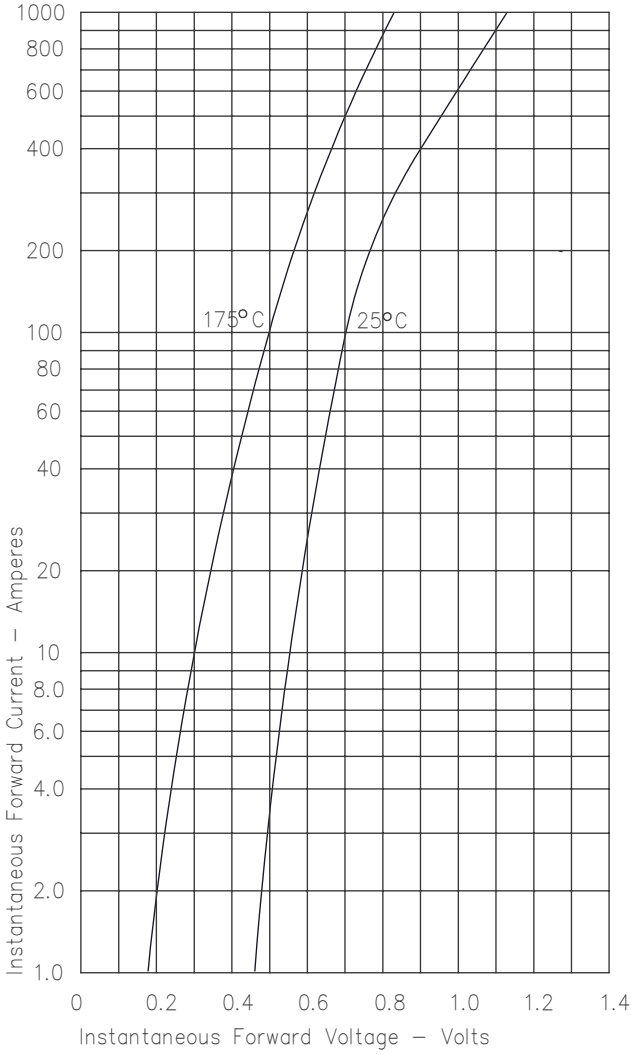


Figure 3
Typical Junction Capacitance – Per Leg

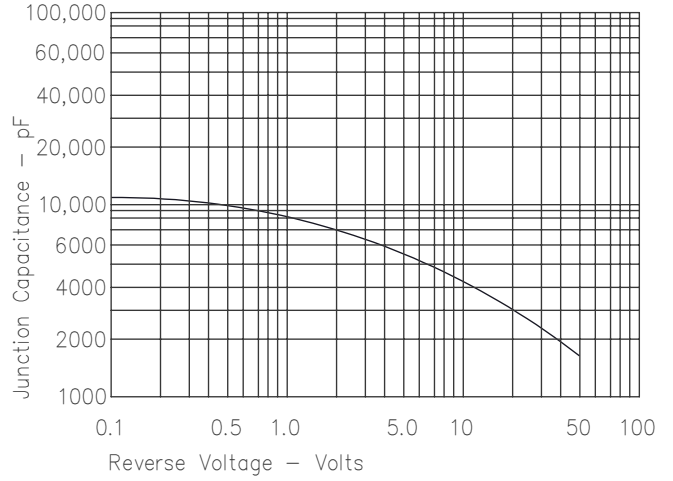


Figure 4
Forward Current Derating – Per Leg

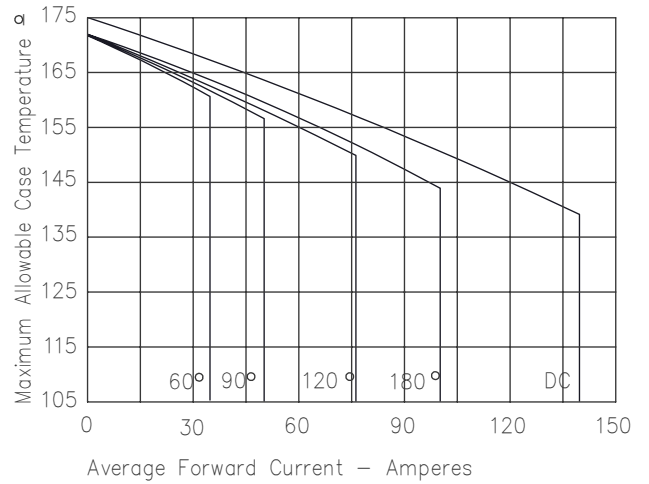


Figure 2
Typical Reverse Characteristics – Per Leg

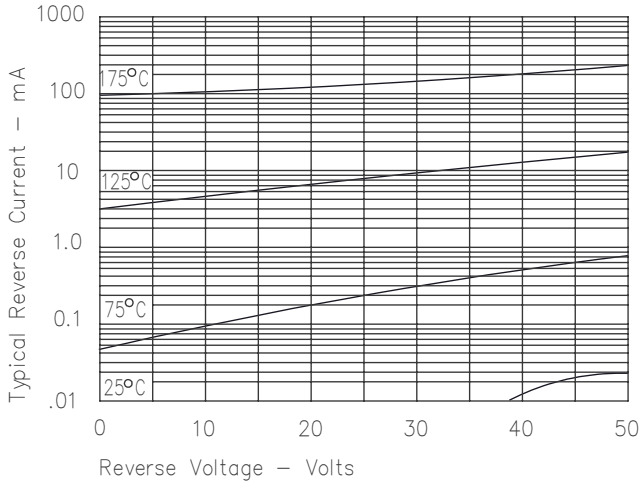


Figure 5
Maximum Forward Power Dissipation – Per Leg

