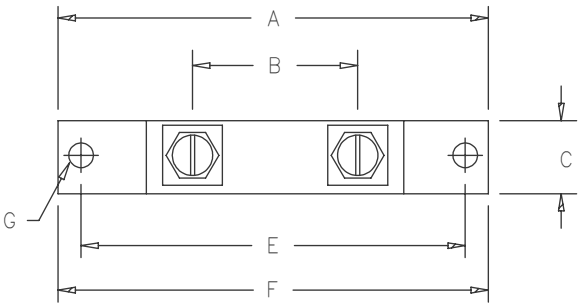
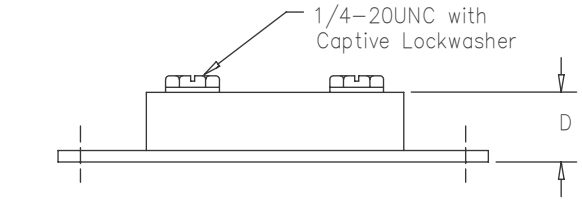
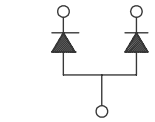
Schottky PowerMod

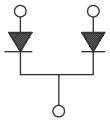
FST20035 – FST20050



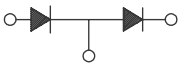




Baseplate
A=Common Anode



Baseplate
Common Cathode



Baseplate
D=Doubler

Notes:
Baseplate: Nickel plated copper

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
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

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

*Pulse test: Pulse width 300µsec, 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

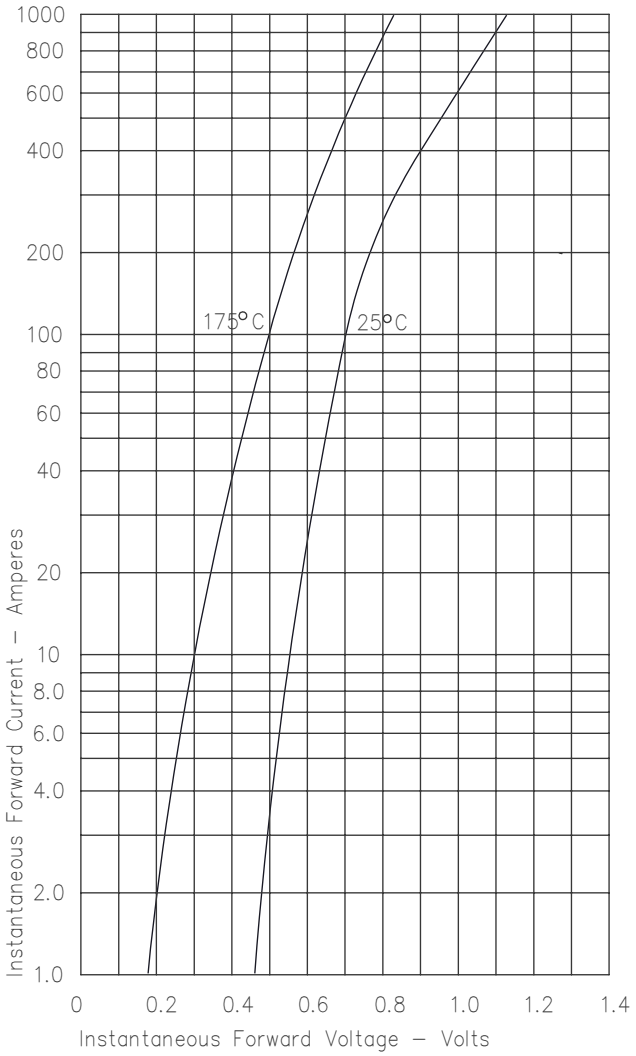


Figure 2
Typical Reverse Characteristics – Per Leg

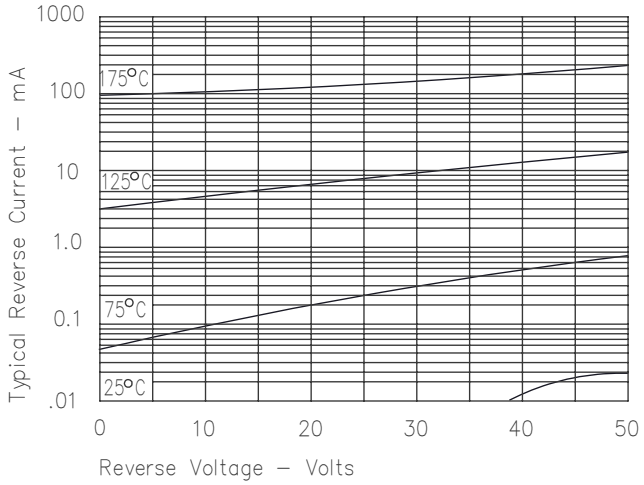


Figure 3
Typical Junction Capacitance – Per Leg

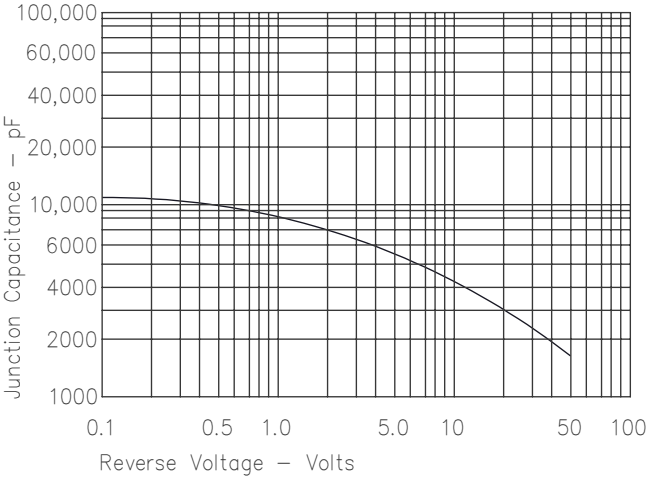


Figure 4
Forward Current Derating – Per Leg

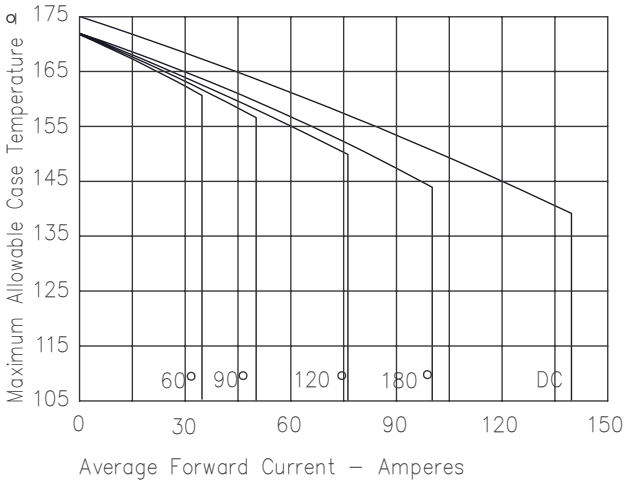


Figure 5
Maximum Forward Power Dissipation – Per Leg

