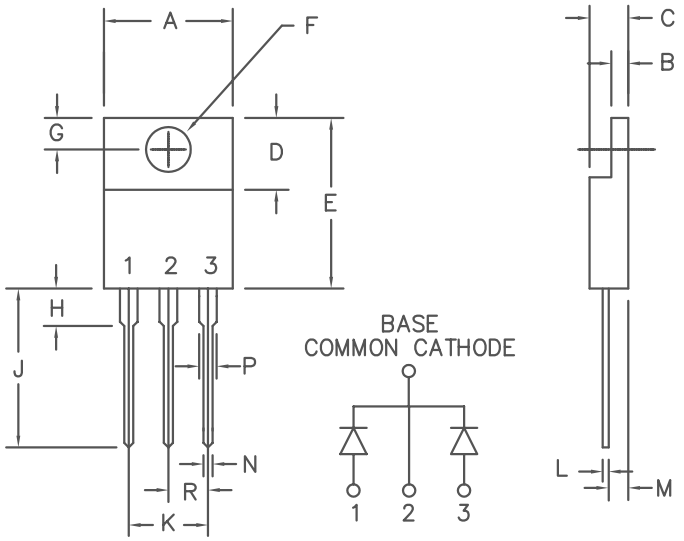
20 Amp Schottky Rectifiers

FST20180–FST20200



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO–220AB

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST20180		180V	180V
FST20200	MBR20200CT	200V	200V

- Schottky barrier rectifier
- V_{RRM} 180–200 Volts
- 2 X 10 Amperes Avg.
- High surge capacity
- 175°C Junction temperature

Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 20 Amps	T_C = 155°C, Square wave
Average Forward Current per leg	$I_{F(AV)}$ 10 Amps	T_C = 155°C, Square wave
Maximum Surge Current per leg	I_{FSM} 225 Amps	8.3ms, half sine, T_J = 175°C
Max. Peak Forward Voltage per leg	V_{FM} .88 Volts	I_{FM} = 10A, T_J = 25°C*
Typical Peak Forward Voltage per leg	V_{FM} .73 Volts	I_{FM} = 10A, T_J = 175°C*
Typ. Peak Reverse Current per leg	I_{RM} 200 µA	V_{RRM}, T_J = 125°C*
Max. Peak Reverse Current per leg	I_{RM} 100 µA	V_{RRM}, T_J = 25°C
Typical Junction Capacitance per leg	C_J 190 pF	V_R = 5.0V, T_J = 25°C

*Pulse test: Pulse width 300 usec. Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	TSTG	–55°C to + 175°C
Operating junction temp range	T_J	–55°C to + 175°C
Max thermal resistance per leg	$R_{\Theta JC}$	2.4°C/W Junction to case
Max thermal resistance per pkg.	$R_{\Theta JC}$	1.2°C/W Junction to case
Typical thermal resistance (greased)	$R_{\Theta CS}$	0.5°C/W Case to sink
Mounting torque		8–12 inch pounds (#6 screw)
Weight		.08 ounces (2.3 grams) typical

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9–2–05 Rev. 0

FST20180–FST20200

Figure 1
Typical Forward Characteristics

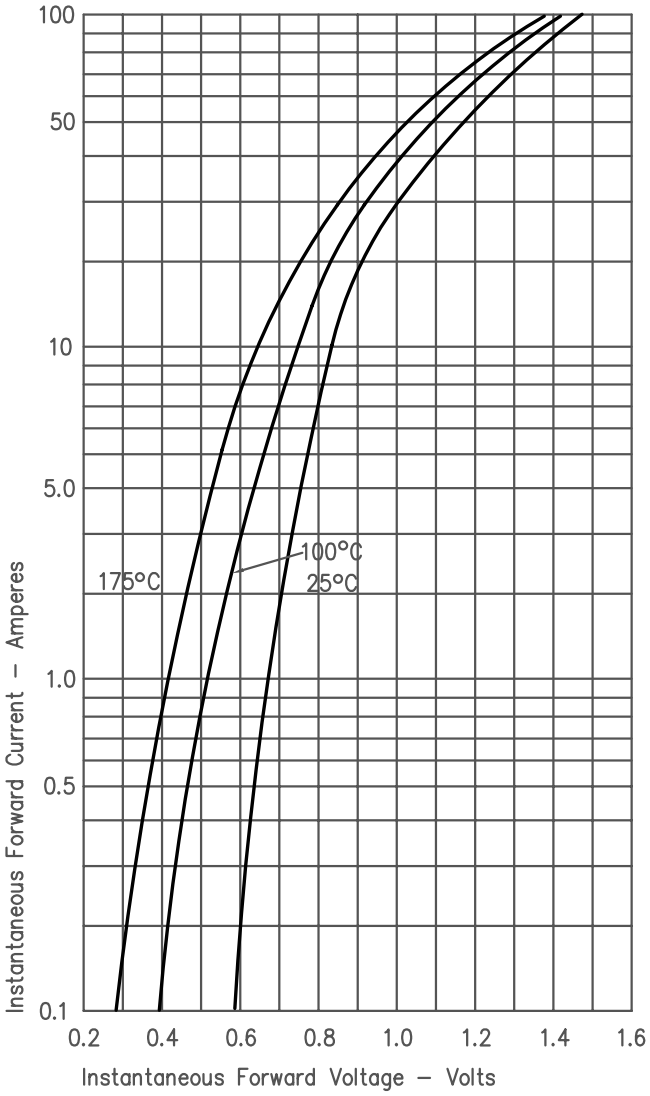

Figure 2
Typical Reverse Characteristics

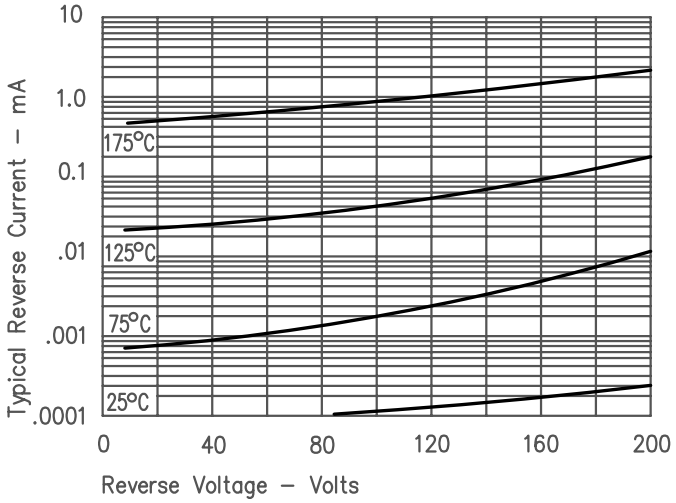

Figure 3
Typical Junction Capacitance

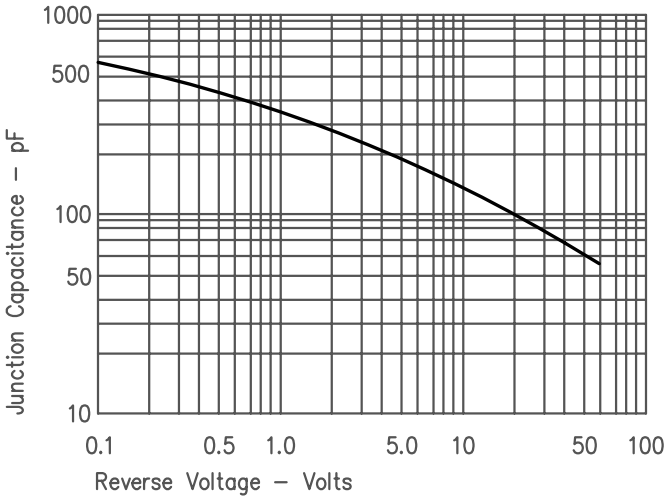

Figure 4
Forward Current Derating

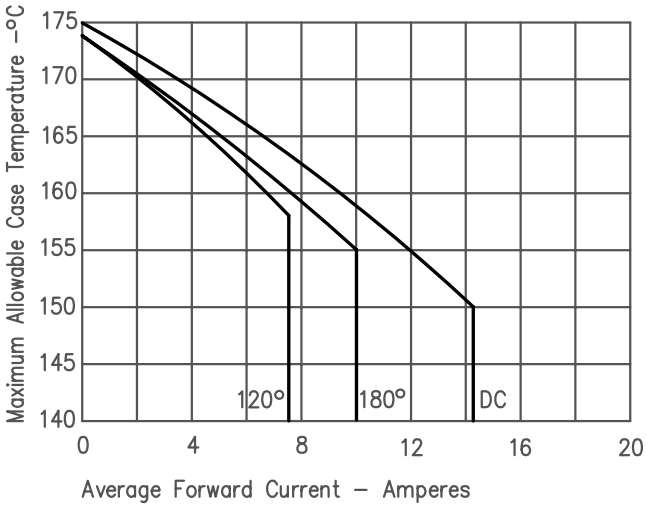

Figure 5
Maximum Forward Power Dissipation