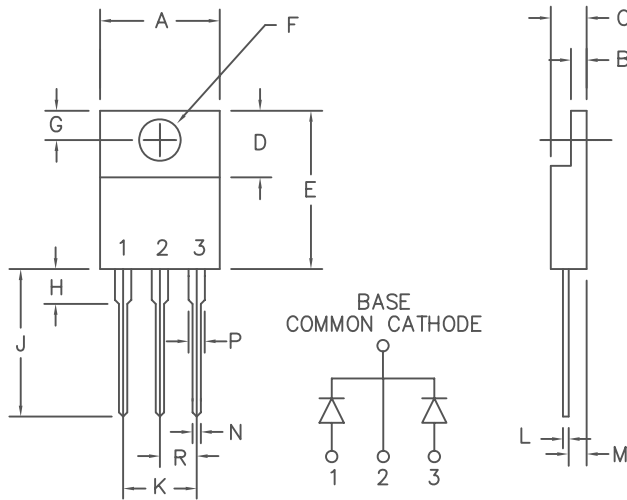


# 20 Amp Schottky Rectifiers FST20120—FST20150



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
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
FST20120		120V	120V
FST20130		130V	130V
FST20150	20CTQ150 MBR20H150CT	150V	150V

- Schottky barrier rectifier
- Guard ring for reverse protection
- 2 X 10 Amperes Avg.
- High surge capacity
- $V_{RRM}$  120–150 Volts

### Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 20 Amps	$T_C = 157^\circ\text{C}$ , Square wave
Average Forward Current per leg	$I_{F(AV)}$ 10 Amps	$T_C = 157^\circ\text{C}$ , Square wave
Maximum Surge Current per leg	$I_{FSM}$ 225 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum Surge Current per leg	$I_{R(OV)}$ 2 Amps	$f = 1\text{KHZ}$ , $25^\circ\text{C}$ , 1us square wave
Max. Peak Forward Voltage per leg	$V_{FM}$ .83 Volts	$I_{FM} = 10\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .64 Volts	$I_{FM} = 10\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 700 $\mu\text{A}$	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 100 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 280 pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

\*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		15 inch pounds maximum (6–32 screw)
Weight		.08 ounces (2.3 grams) typical



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05-17-07 Rev. 1

# FST20120-FST20150

Figure 1  
Typical Forward Characteristics – Per Leg

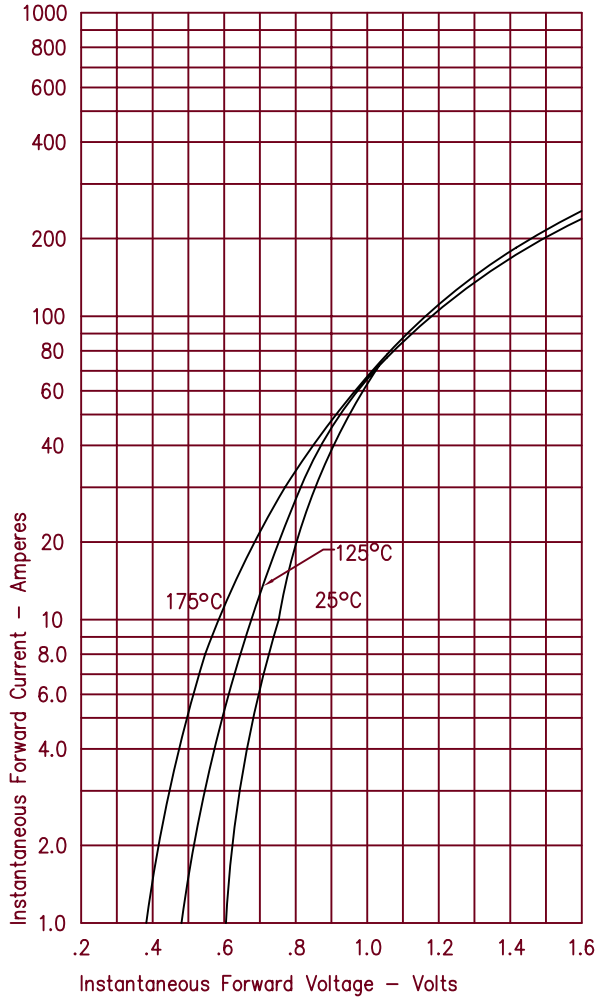


Figure 3  
Typical Junction Capacitance – Per Leg

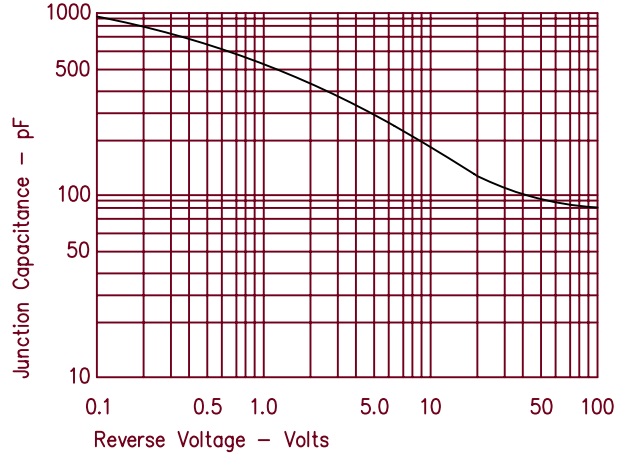


Figure 4  
Forward Current Derating – Per Leg

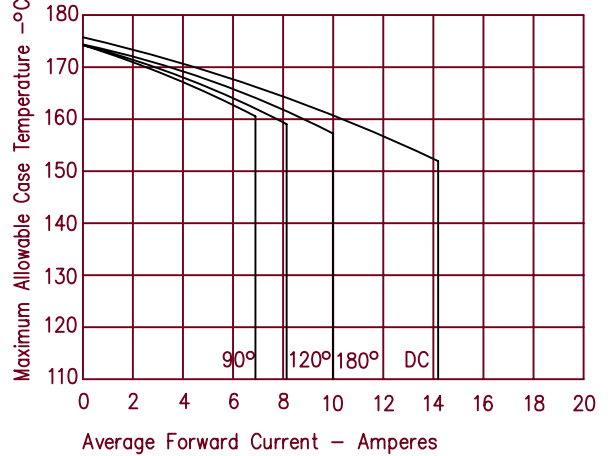


Figure 2  
Typical Reverse Characteristics – Per Leg

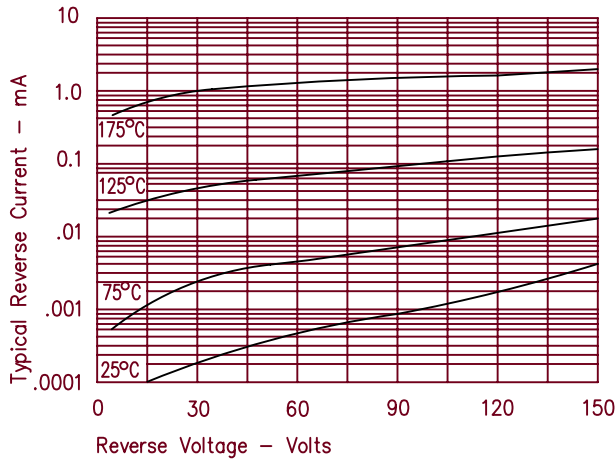


Figure 5  
Maximum Forward Power Dissipation – Per Leg

