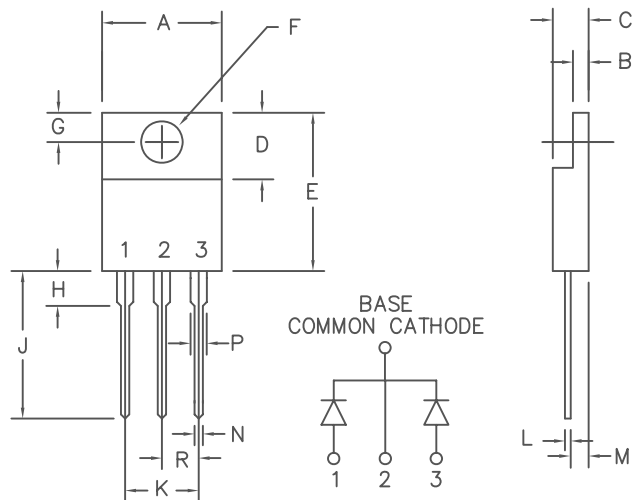


20 Amp Schottky Rectifiers FST20120–FST20150



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	Dia.
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	
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	20CTQ150 MBR20H150CT	120V	120V
FST20130		130V	130V
FST20150		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	$T_C = 157^\circ C$, Square wave
Average Forward Current per leg	$I_F(AV)$ 10 Amps	$T_C = 157^\circ C$, Square wave
Maximum Surge Current per leg	I_{FSM} 225 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Maximum Surge Current per leg	$I_{R(OV)}$ 2 Amps	$f = 1KHZ$, $25^\circ C$, 1us square wave
Max. Peak Forward Voltage per leg	V_{FM} .83 Volts	$I_{FM} = 10A$, $T_J = 25^\circ C^*$
Max. Peak Forward Voltage per leg	V_{FM} .64 Volts	$I_{FM} = 10A$, $T_J = 175^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 700 μA	V_{RRM} , $T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	I_{RM} 100 μA	V_{RRM} , $T_J = 25^\circ C$
Typical Junction Capacitance	C_J 280 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $+175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $+175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	2.4 $^\circ C/W$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	1.2 $^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.5 $^\circ C/W$ 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

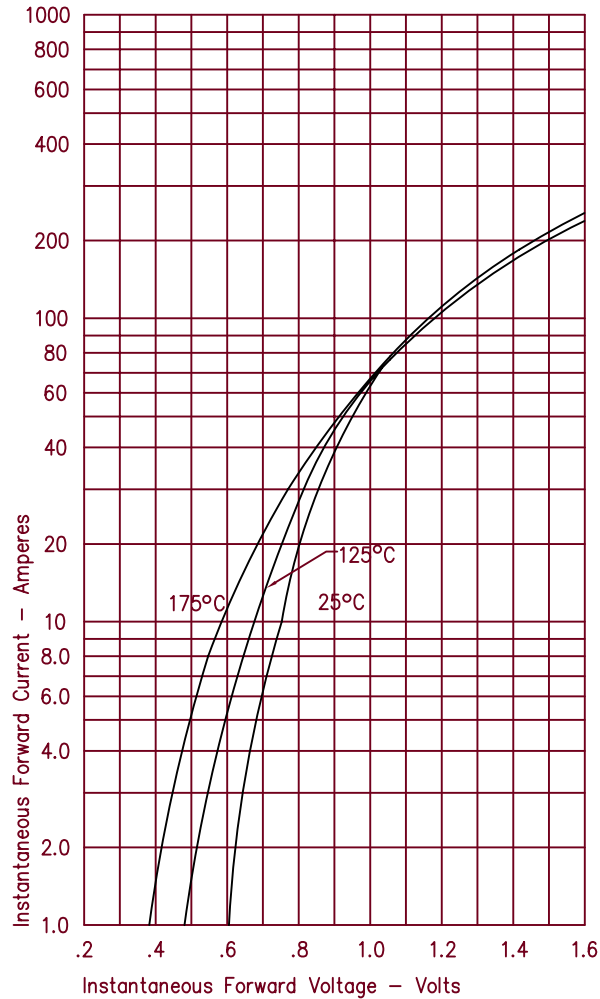


Figure 3
Typical Junction Capacitance – Per Leg

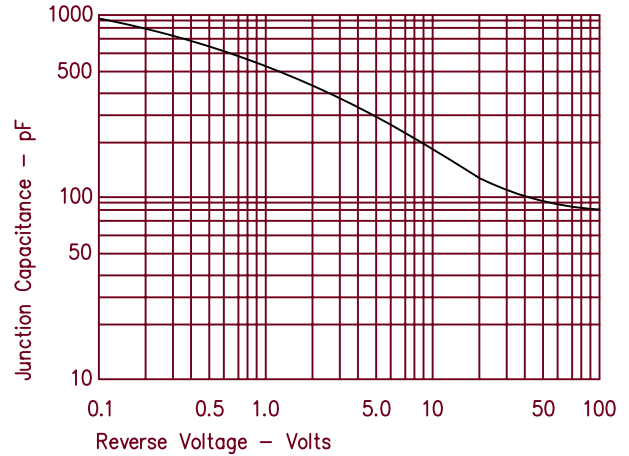


Figure 4
Forward Current Derating – Per Leg

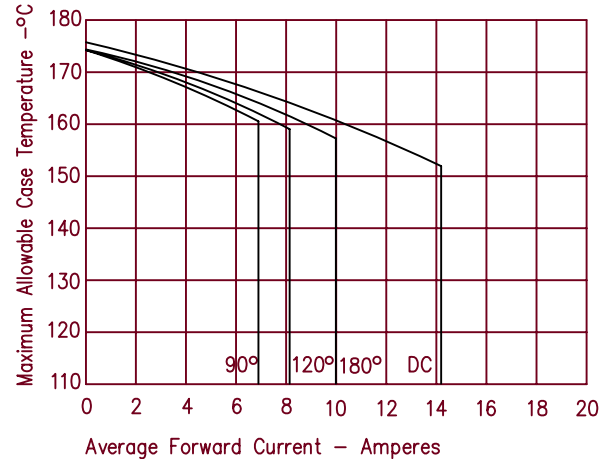


Figure 2
Typical Reverse Characteristics – Per Leg

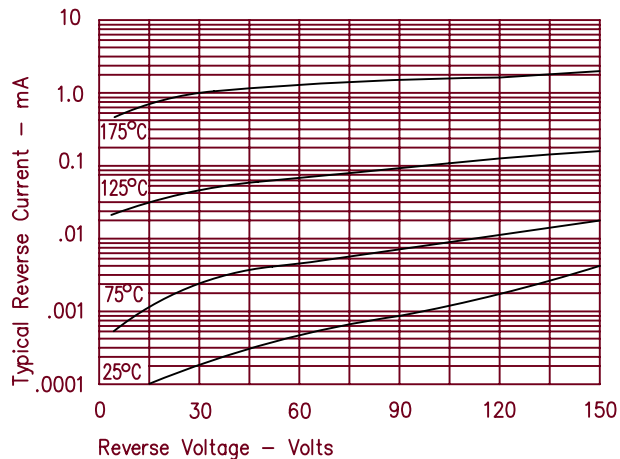


Figure 5
Maximum Forward Power Dissipation – Per Leg

