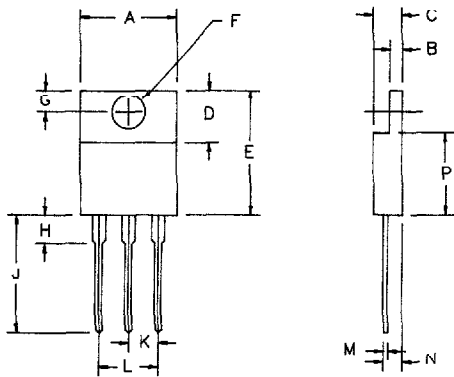


10 Amp Schottky Barrier Rectifiers FST1080 — FST1090



PLASTIC TO220

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.90	10.5	
B	.050	.055	1.27	1.40	
C	.180	.185	4.57	4.70	
D	.248	.260	6.30	6.60	
E	.590	.605	14.98	15.40	
F	.145	.150	3.68	3.81	Dia.
G	.108	.120	2.74	3.05	
H	.163	.170	4.14	4.32	
J	.540	.570	13.72	14.5	
K	.087	.091	2.20	2.31	
L	.200	.205	5.08	5.21	
M	.021	.025	.533	.635	
N	.125	.140	3.18	3.56	
P	.335	.342	8.50	8.69	

Technical Bulletin

Microsemi Catalog
Number
FST1080
FST1090

Repetitive Peak
Reverse Voltage
80V
90V

Transient Peak
Reverse Voltage
80V
90V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 80 to 90 Volts

Electrical Characteristics

Average Forward Current per pkg.
Average Forward Current per leg
Maximum Surge Current per leg
Max. Peak Forward Voltage per leg
Max. Peak Forward Voltage per leg
Max. Peak Reverse Current per leg
Max. Peak Reverse Current per leg
Typical Junction Capacitance

$I_{F(AV)}$ 10 Amps
 $I_{F(AV)}$ 5 Amps
 I_{FSM} 300 Amps
 V_{FM} .60 Volts
 V_{FM} .80 Volts
 I_{RM} 10 mA
 I_{RM} 250 μ A
 C_J 280 pF

$T_C = 150^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$
 $T_C = 150^\circ\text{C}$, Square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 5A, T_J = 175^\circ\text{C}^*$
 $I_{FM} = 5A, T_J = 25^\circ\text{C}^*$
 $V_{RRM}, T_J = 125^\circ\text{C}^*$
 $V_{RRM}, T_J = 25^\circ\text{C}$
 $V_R = 5.0V, T_J = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μ sec Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg.
Typical thermal resistance per leg
Mounting torque
Typical Weight

T_{STG} -40°C to 175°C
 T_J -40°C to 175°C
 $R_{\theta JC}$ 5.6°C/W
 $R_{\theta JC}$ 2.8°C/W
 $R_{\theta JC}$ 4.7°C/W
15 inch pounds maximum (6-32 screw)
.08 ounces (2.3 grams) typical

Microsemi Corp.
Colorado

FST1080 — FST1090



Figure 1
Typical Forward Characteristics — Per Leg

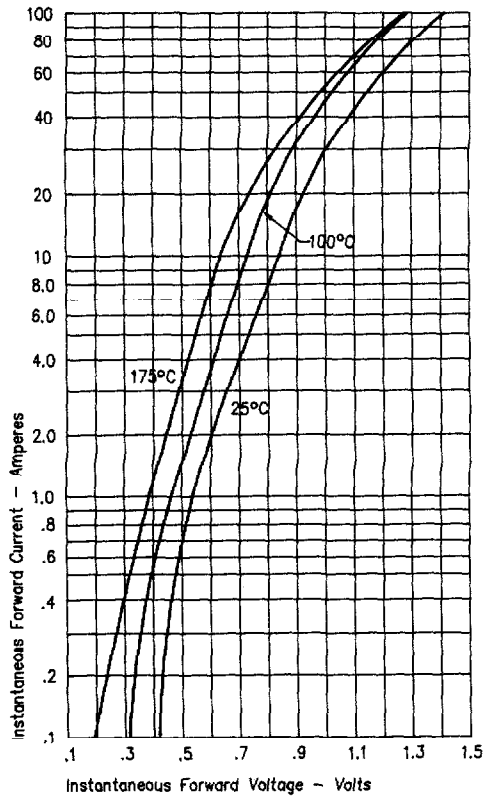


Figure 3
Typical Junction Capacitance — Per Leg

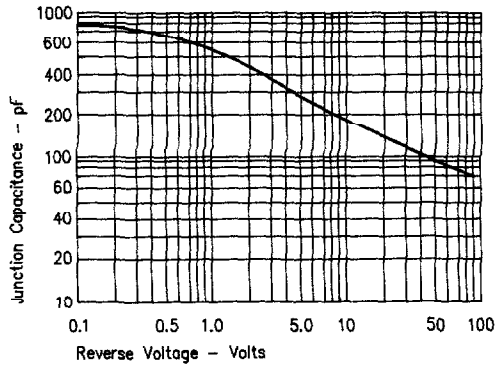


Figure 4
Forward Current Derating — Per Leg

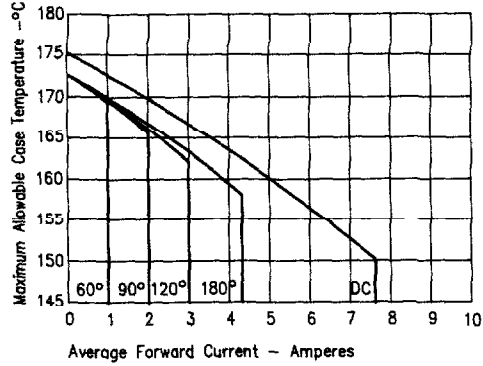


Figure 2
Typical Reverse Characteristics — Per Leg

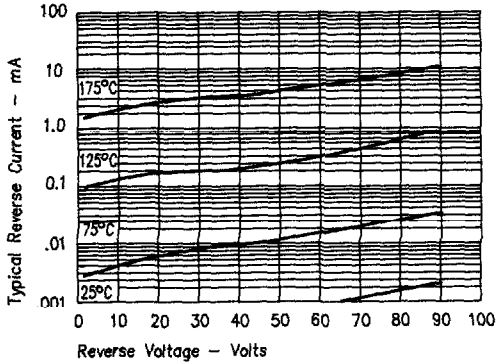


Figure 5
Maximum Forward Power Dissipation — Per Leg

