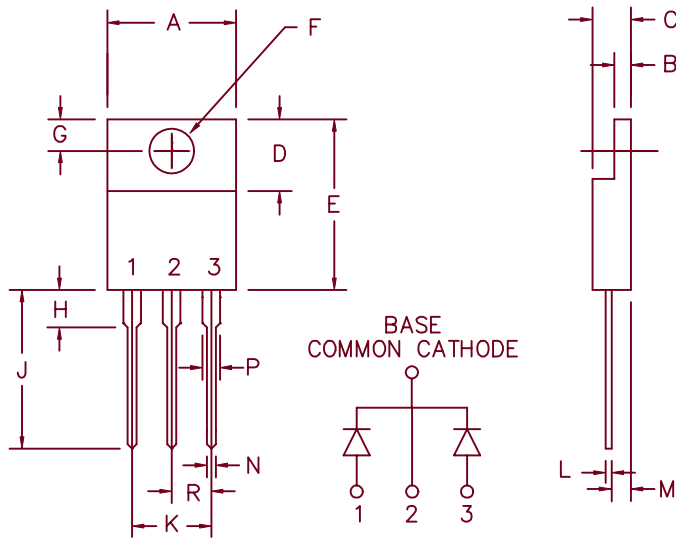


10 Amp Schottky Barrier Rectifiers FST1080 — FST10100



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

Technical Bulletin

Microsemi Catalog
Number

FST1080
FST1090
FST10100

Repetitive Peak
Reverse Voltage

80V
90V
100V

Transient Peak
Reverse Voltage

80V
90V
100V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 80 to 100 Volts

Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 10 Amps	$T_C = 154^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.8^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 5 Amps	$T_C = 154^\circ\text{C}$, Square wave, $R_{\theta JC} = 3.6^\circ\text{C/W}$
Maximum Surge Current per leg	I_{FSM} 200 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	V_{FM} .60 Volts	$I_{FM} = 5\text{A}$, $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	V_{FM} .85 Volts	$I_{FM} = 5\text{A}$, $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	I_{RM} 10 mA	V_{RRM} , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	I_{RM} 250 μA	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 μsec 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	$R_{\theta JC}$	3.6°C/W Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	1.8°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

FST1080 — FST10100

Figure 1
Typical Forward Characteristics — Per Leg

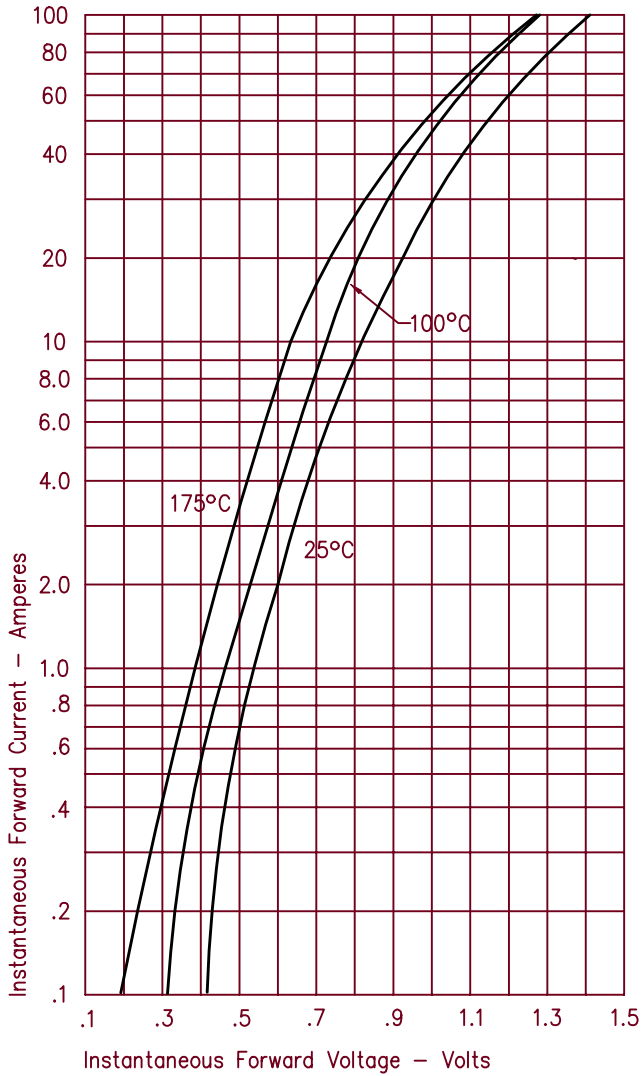


Figure 3
Typical Junction Capacitance — Per Leg

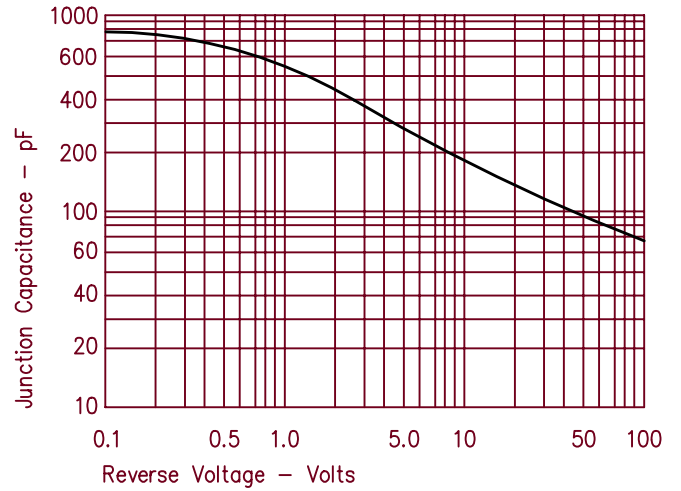


Figure 4
Forward Current Derating — Per Leg

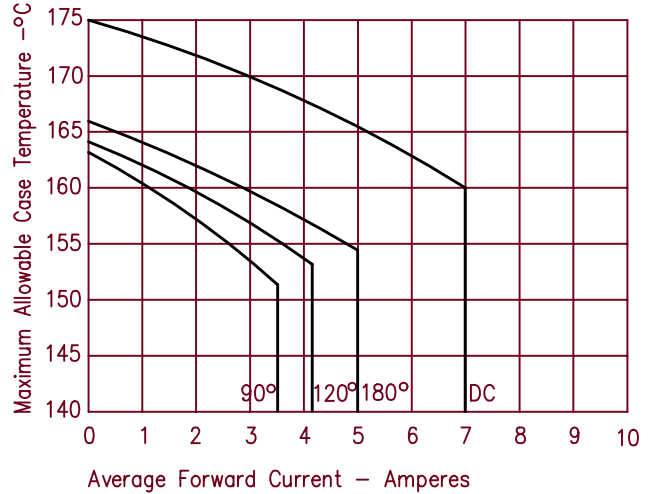


Figure 2
Typical Reverse Characteristics — Per Leg

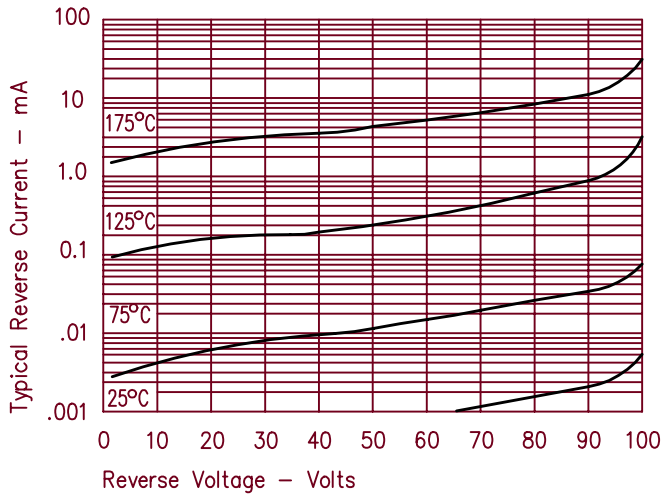
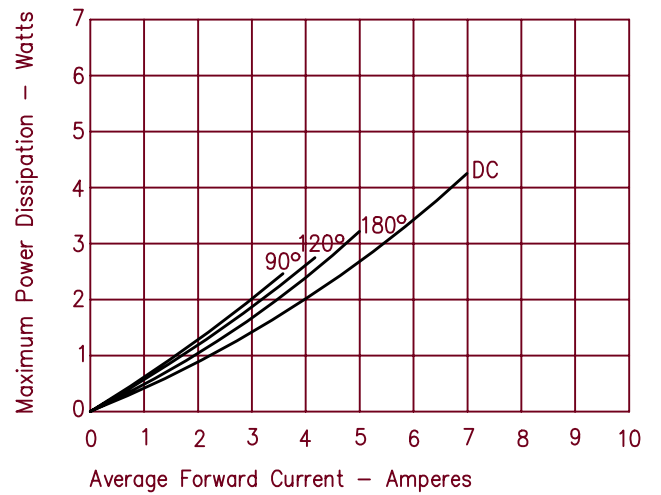


Figure 5
Maximum Forward Power Dissipation — Per Leg





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