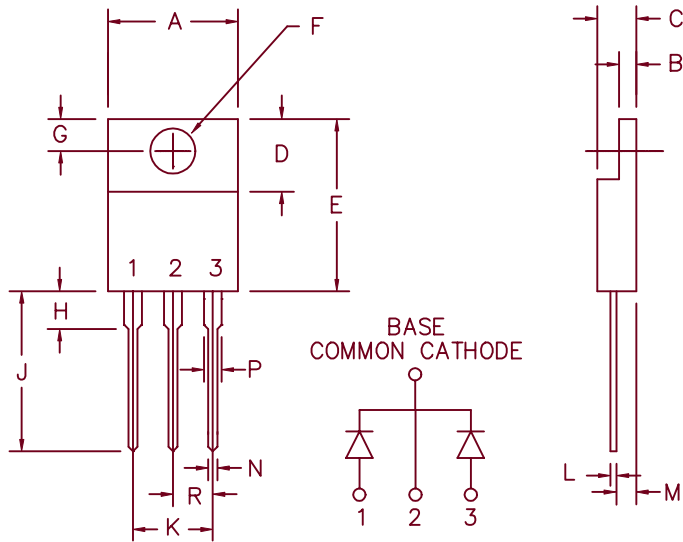


# 20 Amp Schottky Barrier Rectifiers FST2080 — FST20100



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

FST2080  
FST2090  
FST20100

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.	$I_{F(AV)}$ 20 Amps	$T_C = 128^\circ\text{C}$ , Square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 10 Amps	$T_C = 128^\circ\text{C}$ , Square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 225 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ .66 Volts	$I_{FM} = 10\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .85 Volts	$I_{FM} = 10\text{A}$ , $T_J = 25^\circ\text{C}^*$
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 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$ 440 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	$R_{\theta JC}$	5.6°C/W
Max thermal resistance per pkg.	$R_{\theta JC}$	2.8°C/W
Typical thermal resistance per leg	$R_{\theta JC}$	4.7°C/W
Mounting torque		15 inch pounds maximum (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

# FST2080 – FST20100

Figure 1  
Typical Forward Characteristics – Per Leg

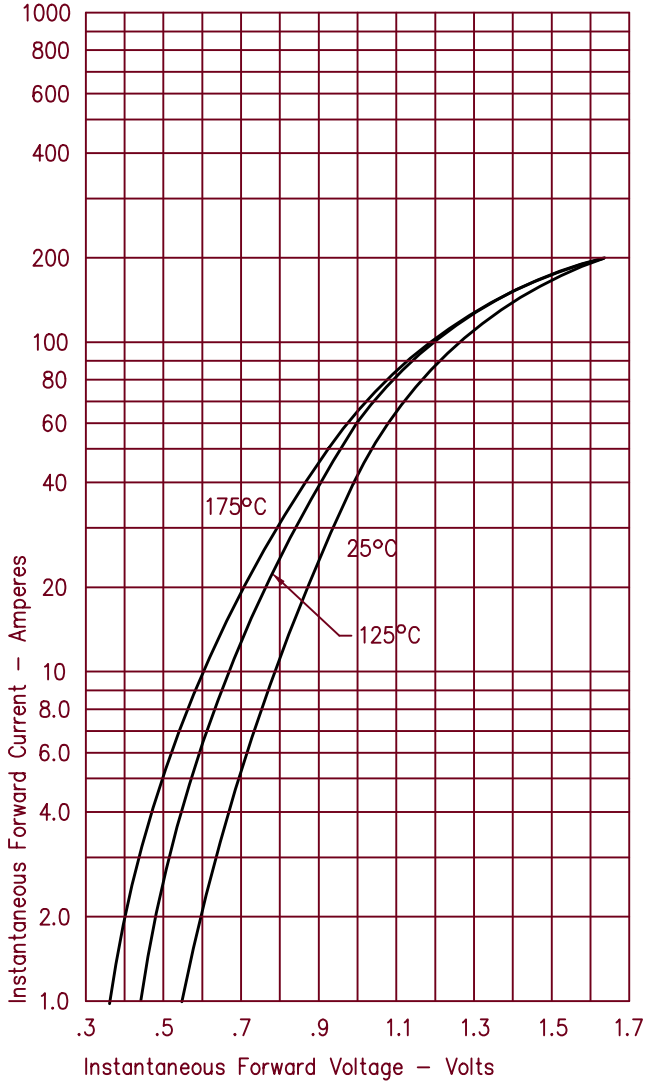


Figure 3  
Typical Junction Capacitance – Per Leg

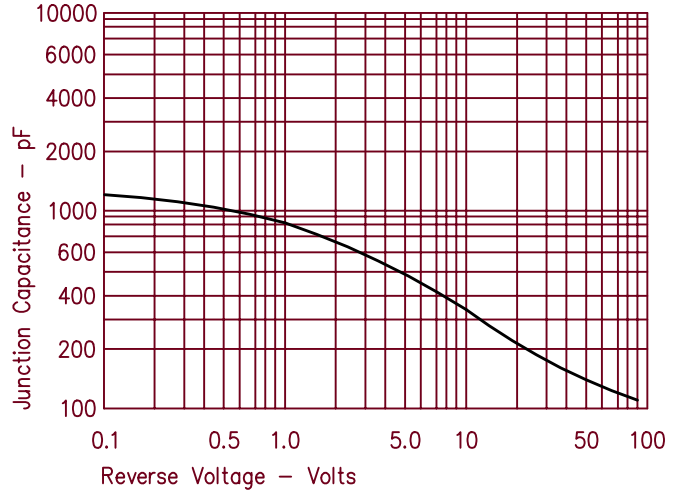


Figure 4  
Forward Current Derating – Per Leg

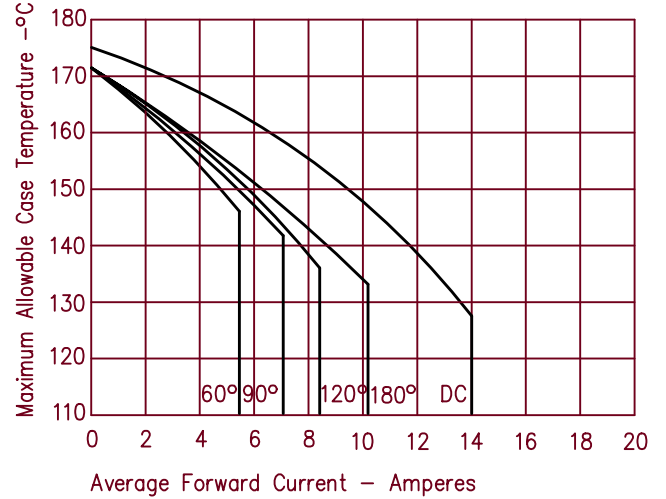


Figure 2  
Typical Reverse Characteristics – Per Leg

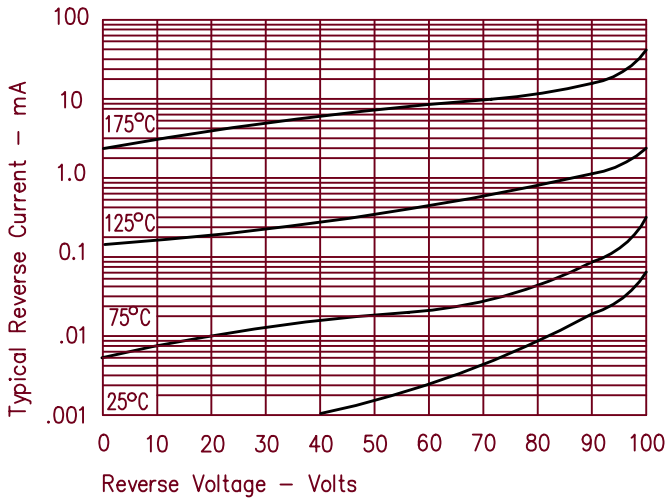
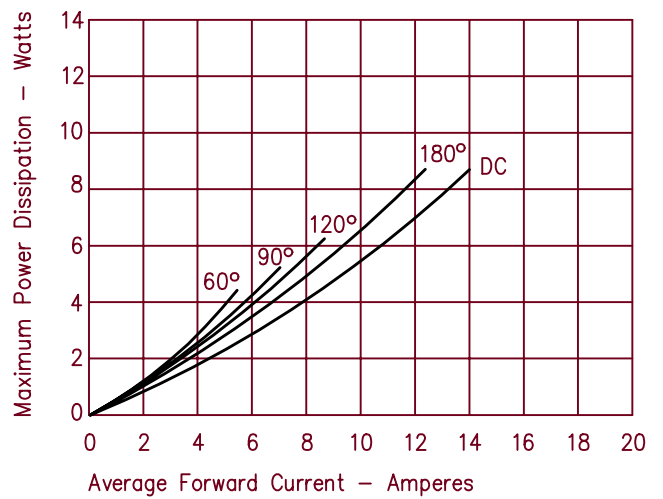


Figure 5  
Maximum Forward Power Dissipation – Per Leg



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