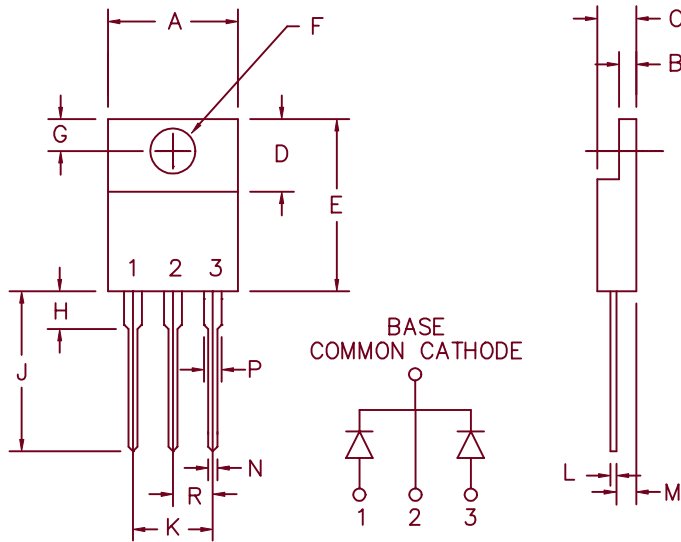


20 Amp Schottky Barrier Rectifiers FST2035 — FST2045



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

FST2035
FST2040
FST2045

Repetitive Peak
Reverse Voltage

35V
40V
45V

Transient Peak
Reverse Voltage

35V
40V
45V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 35 to 45 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

$I_F(AV)$ 20 Amps
 $I_F(AV)$ 10 Amps
 I_{FSM} 225 Amps
 V_{FM} .48 Volts
 V_{FM} .65 Volts
 I_{RM} 10 mA
 I_{RM} 250 μ A
 C_J 660 pF

$T_C = 139^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.8^\circ\text{C/W}$
 $T_C = 139^\circ\text{C}$, Square wave, $R_{\theta JC} = 5.6^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 10\text{A}$, $T_J = 175^\circ\text{C}^*$
 $I_{FM} = 10\text{A}$, $T_J = 25^\circ\text{C}^*$
 V_{RRM} , $T_J = 125^\circ\text{C}^*$
 V_{RRM} , $T_J = 25^\circ\text{C}$
 $V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

*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
Weight

T_{STG}
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$
 $R_{\theta JC}$

-55°C to 175°C
 -55°C to 175°C
 5.6°C/W
 2.8°C/W
 4.7°C/W
15 inch pounds maximum (6-32 screw)
.08 ounces (2.3 grams) typical

FST2035 — FST2045

Figure 1
Typical Forward Characteristics — Per Leg

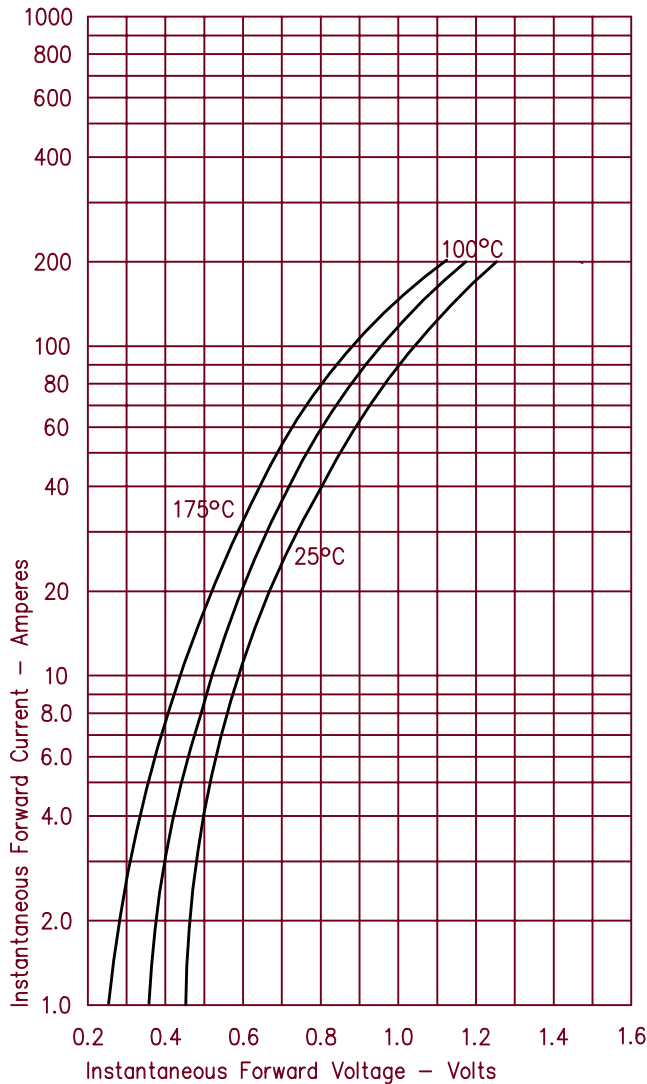


Figure 3
Typical Junction Capacitance — Per Leg

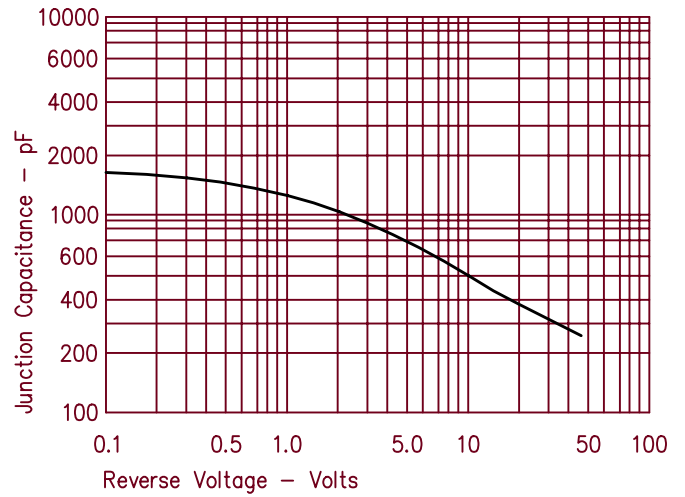


Figure 4
Forward Current Derating — Per Leg

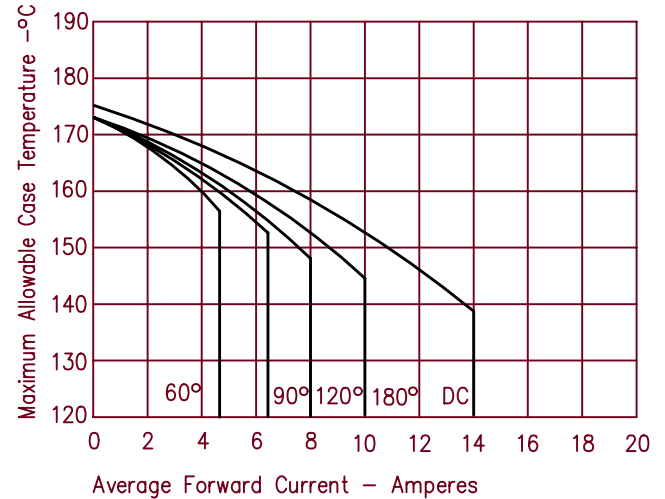


Figure 2
Typical Reverse Characteristics — Per Leg

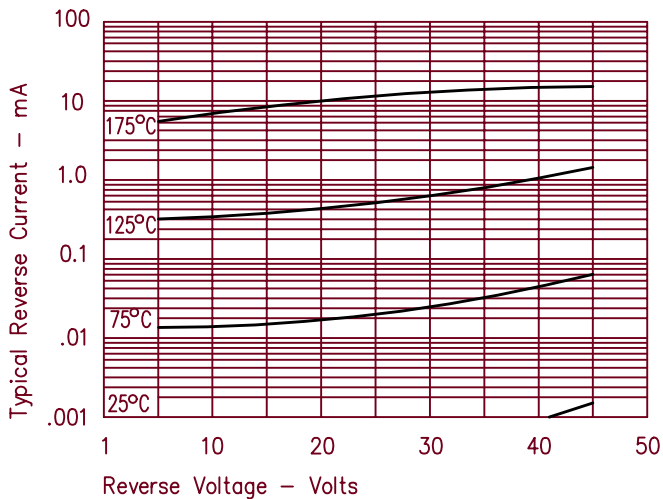


Figure 5
Maximum Forward Power Dissipation — Per Leg

