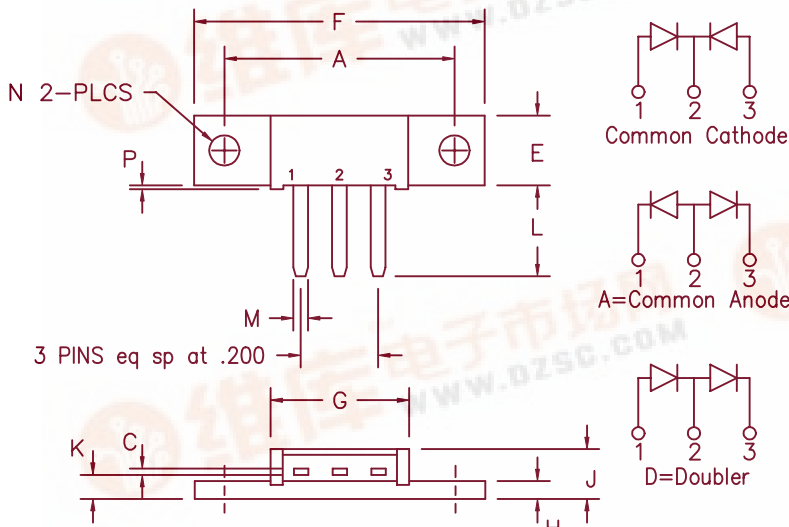


FST8035 — FST8050



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.180	1.195	29.97	30.35	
C	.027	.037	0.69	0.94	
E	.350	.370	8.89	9.40	
F	1.490	1.510	37.85	38.35	
G	.695	.715	17.65	18.16	
H	.088	.098	2.24	2.49	
J	.240	.260	6.10	6.60	
K	.115	.135	2.92	3.43	
L	.460	.480	11.68	12.19	
M	.065	.085	1.65	2.16	
N	.151	.161	3.84	4.09	Dia.
P	.015	.025	0.38	0.64	

Note: Baseplate Common with Pin 2

Microsemi
Catalog Number

FST8035*
FST8040*
FST8045*
FST8050*

Working
Peak Reverse
Voltage

35V
40V
45V
50V

Repetitive
Peak Reverse
Voltage

35V
40V
45V
50V

*Add the Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 2X40 Amperes avg.
- 175°C Junction Temperature
- Reverse Energy Tested
- V_{RRM} - 35 to 50 Volts

Electrical Characteristics

Average forward current per pkg
Average forward current per leg
Maximum surge current per leg
Max repetitive peak reverse 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 per leg

$I_F(AV)$ 80 Amps
 $I_F(AV)$ 40 Amps
 I_{FSM} 800 Amps
 $I_R(OV)$ 2 Amps
 V_{FM} 0.49 Volts
 V_{FM} 0.68 Volts
 I_{RM} 50 mA
 I_{RM} 2 mA
 C_J 1900 pF

$T_C = 145^\circ C$, Square wave, $R_{\theta JC} = 0.5^\circ C/W$
 $T_C = 145^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
8.3 ms, half sine, $T_J = 175^\circ C$
 $f = 1$ KHZ, $25^\circ C$, 1 usec square wave
 $I_{FM} = 40A$: $T_J = 175^\circ C^*$
 $I_{FM} = 40A$: $T_J = 25^\circ C^*$
 V_{RRM} , $T_J = 125^\circ C^*$
 V_{RRM} , $T_J = 25^\circ C$
 $V_R = 5.0V$, $T_C = 25^\circ C$

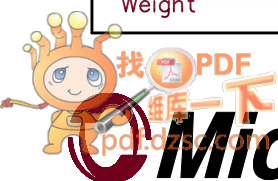
*Pulse test: Pulse width 300 usec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg
Typical thermal resistance (greased)
Mounting Base Torque
Weight

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

$-55^\circ C$ to $175^\circ C$
 $-55^\circ C$ to $175^\circ C$
 $1.0^\circ C/W$ Junction to case
 $0.5^\circ C/W$ Junction to case
 $0.3^\circ C/W$ Case to sink
10 inch pounds maximum
0.3 ounce (8.4 grams) typical



COLORADO

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2-15-00 Rev. IR

FST8035 — FST8050

Figure 1
Typical Forward Characteristics — Per Leg

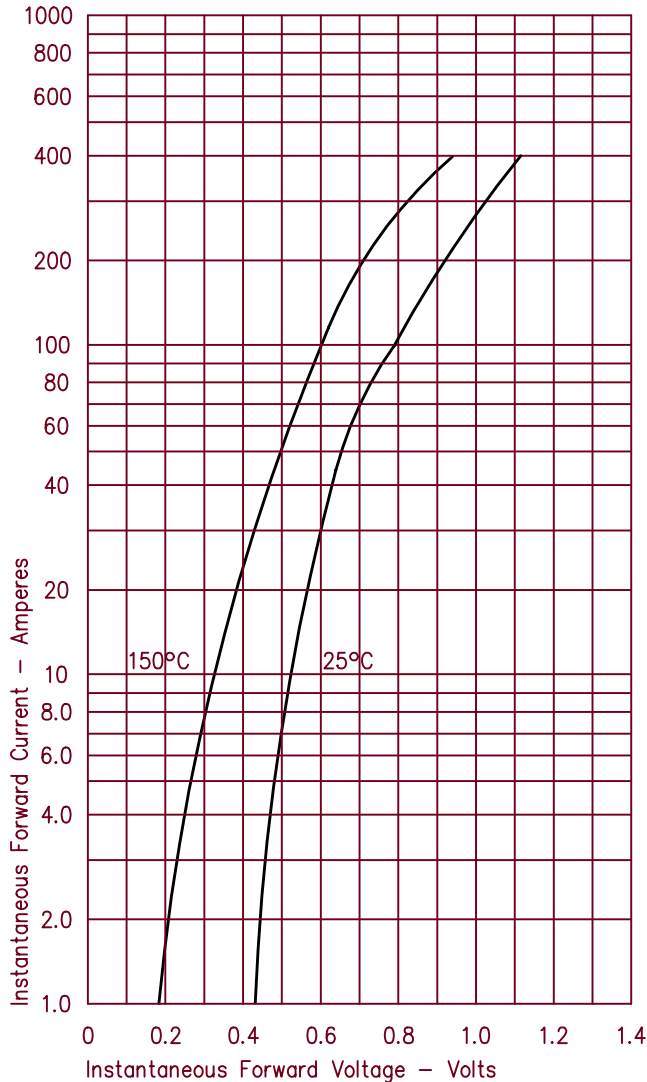


Figure 3
Typical Junction Capacitance — Per Leg

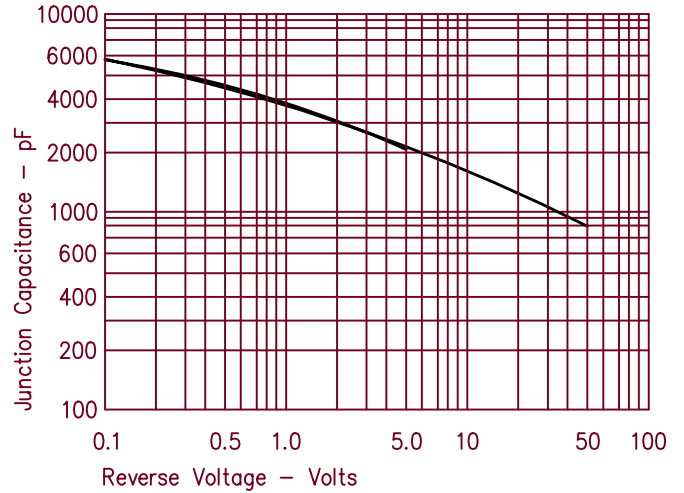


Figure 4
Forward Current Derating — Per Leg

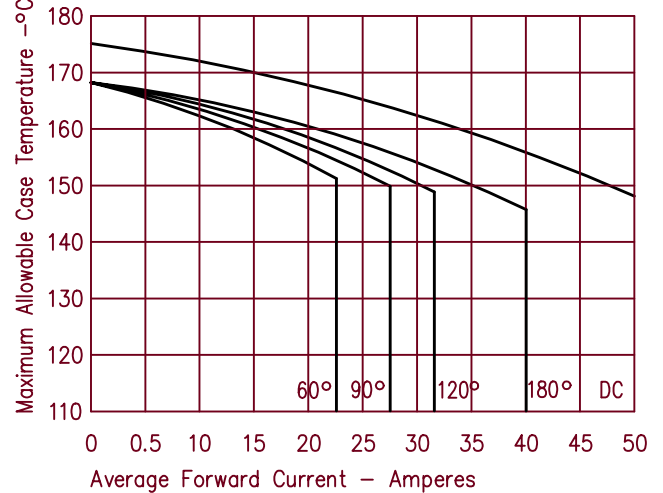


Figure 2
Typical Reverse Characteristics — Per Leg

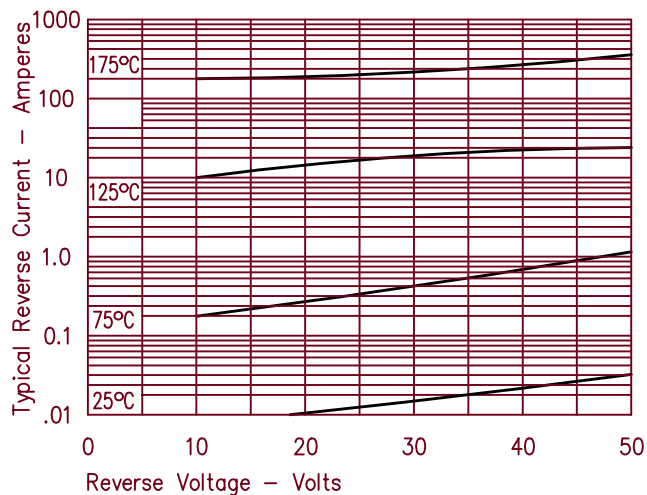


Figure 5
Maximum Forward Power Dissipation — Per Leg

