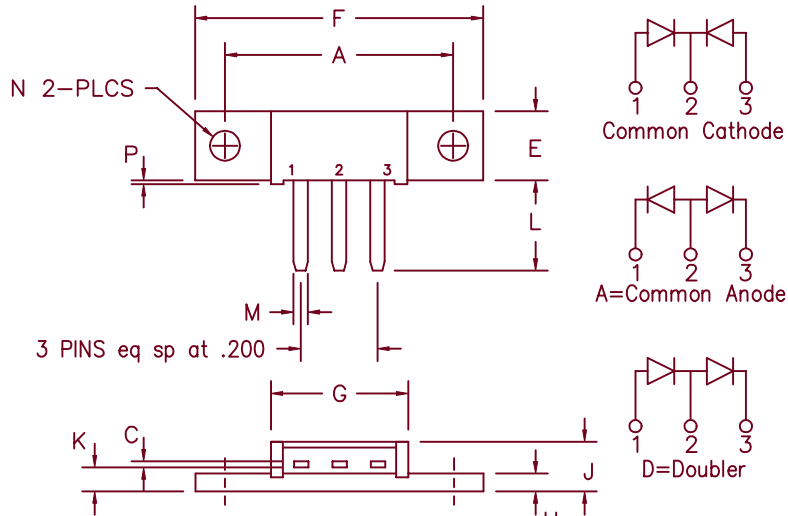


Schottky MiniMod

FST8080 — FST80100



Note: Baseplate Common with Pin 2

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	

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST8080*	83CNQ080	80V	80V
FST8090*		90V	90V
FST80100*	83CNQ100	100V	100V

*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} 80 to 100 volts

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 80 Amps	$T_C = 143^\circ C$, square wave, $R_{\theta JC} = 0.5^\circ C/W$
Average forward current per leg	$I_F(AV)$ 40 Amps	$T_C = 143^\circ C$, square wave, $R_{\theta JC} = 1.0^\circ C/W$
Maximum surge current per leg	I_{FSM} 800 Amps	8.3 ms, half sine, $T_J = 175^\circ C$
Max repetitive peak reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1$ KHZ, $25^\circ C$, 1 μsec square wave
Max peak forward voltage per leg	V_{FM} 0.62 Volts	$I_{FM} = 40A$: $T_J = 175^\circ C^*$
Max peak forward voltage per leg	V_{FM} 0.82 Volts	$I_{FM} = 40A$: $T_J = 25^\circ C^*$
Max peak reverse current per leg	I_{RM} 50 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current per leg	I_{RM} 2 mA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance per leg	C_J 1450 pF	$V_R = 5.0V$, $T_C = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$1.0^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.5^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.3^\circ C/W$ Case to sink
Mount base torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical

FST8080 — FST80100

Figure 1
Typical Forward Characteristics — Per Leg

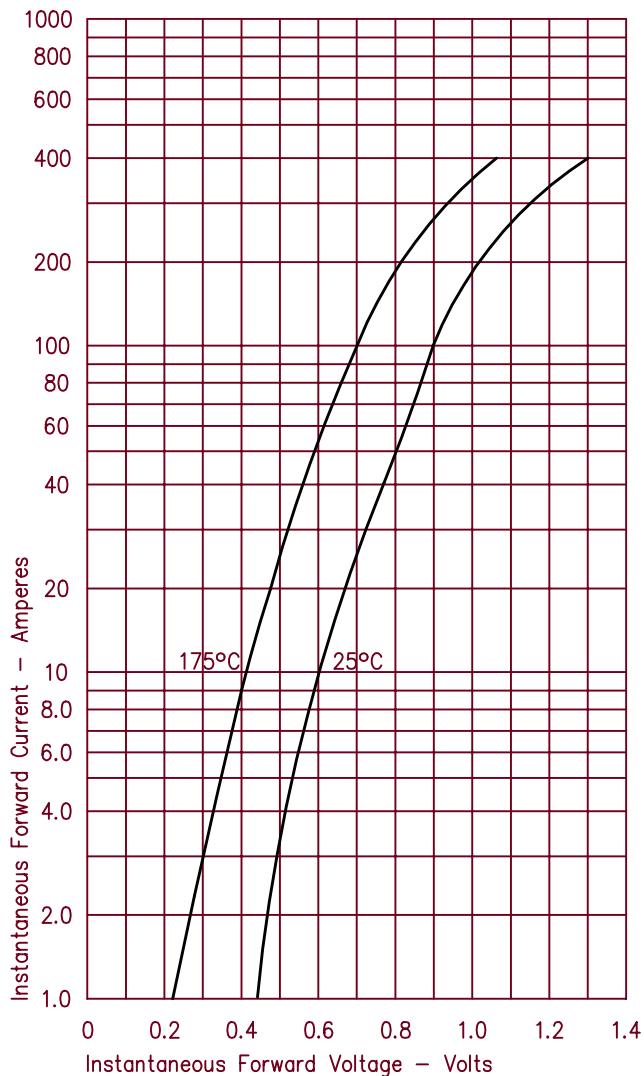


Figure 3
Typical Junction Capacitance — Per Leg

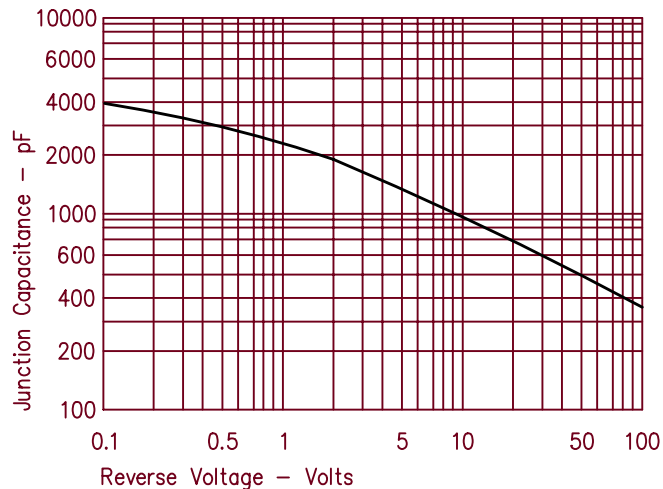


Figure 4
Forward Current Derating — Per Leg

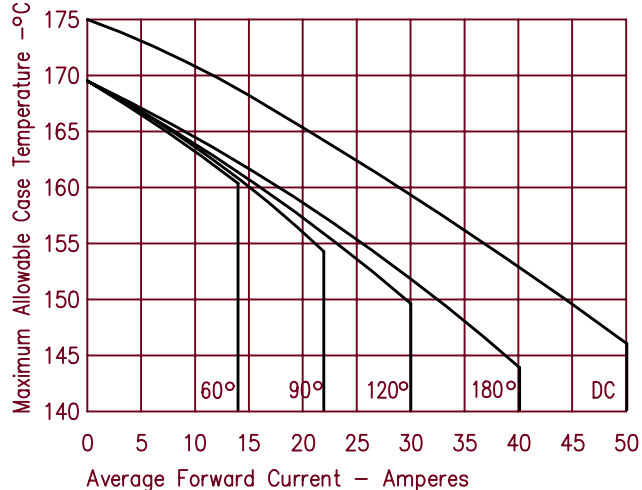


Figure 2
Typical Reverse Characteristics — Per Leg

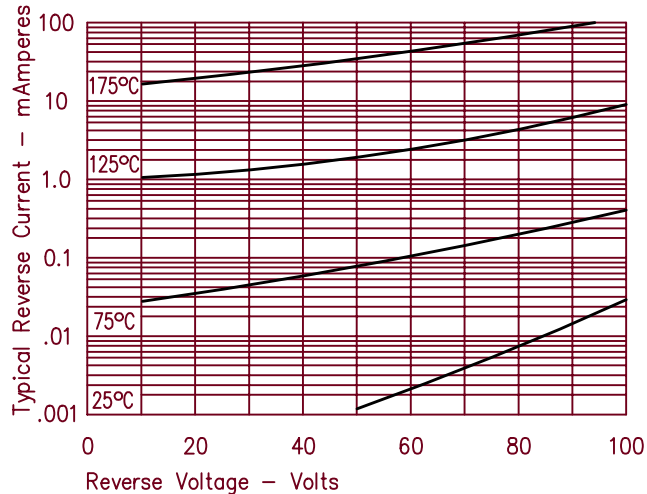


Figure 5
Maximum Forward Power Dissipation — Per Leg

