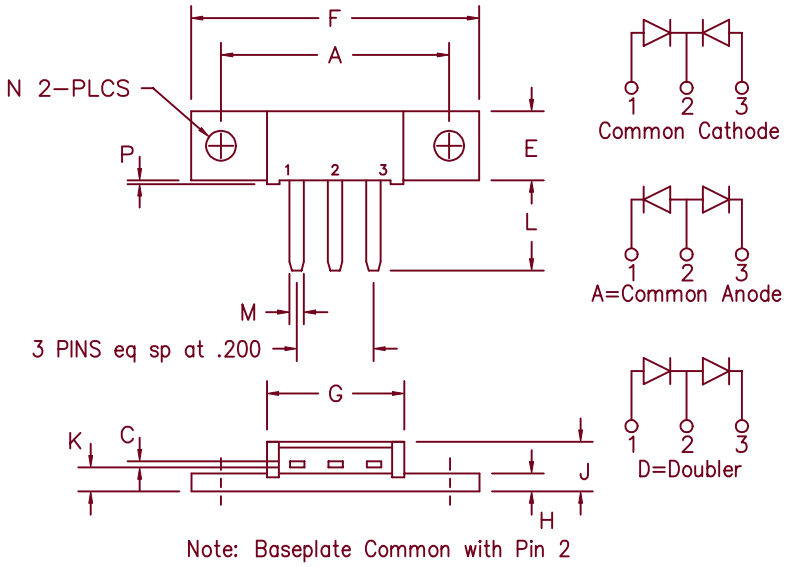
Schottky MiniMod

FST8130 – FST8145



Note: Baseplate Common with Pin 2

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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
FST8130*		30V	30V
FST8135*	80CNQ035 84CNQ035	35V	35V
FST8140*	80CNQ040 84CNQ040	40V	40V
FST8145*	80CNQ045 84CNQ045	45V	45V

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

- Schottky Barrier Rectifier
- Guard Ring Protection
- Common Cathode Center Tap
- 2X40 Amperes avg.
- 150°C Junction Temperature
- Reverse Energy Tested
- Low Forward Voltage

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 80 Amps	T_C = 110°C, Square wave, $R_{\theta JC}$ = 0.5°C/W
Average forward current per leg	$I_{F(AV)}$ 40 Amps	T_C = 110°C, Square wave, $R_{\theta JC}$ = 1.0°C/W
Maximum surge current per leg	I_{FSM} 800 Amps	8.3 ms, half sine, T_J = 150°C
Max repetitive peak reverse current per leg	$I_{R(OV)}$ 2 Amps	f = 1 KHZ, 25°C, 1 usec square wave
Max peak forward voltage per leg	V_{FM} 0.47 Volts	I_{FM} = 40A: T_J = 150°C*
Max peak forward voltage per leg	V_{FM} 0.53 Volts	I_{FM} = 40A: T_J = 25°C*
Max peak reverse current per leg	I_{RM} 500 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM} 3.0 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance per leg	C_J 2100 pF	V_R = 5.0V, T_C = 25°C

*Pulse test: Pulse width 300 usec, 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 150°C
Max thermal resistance per leg	$R_{\theta JC}$	1.0°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.5°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.3°C/W Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical

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7–25–01 Rev. 1

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Figure 1
Typical Forward Characteristics – Per Leg

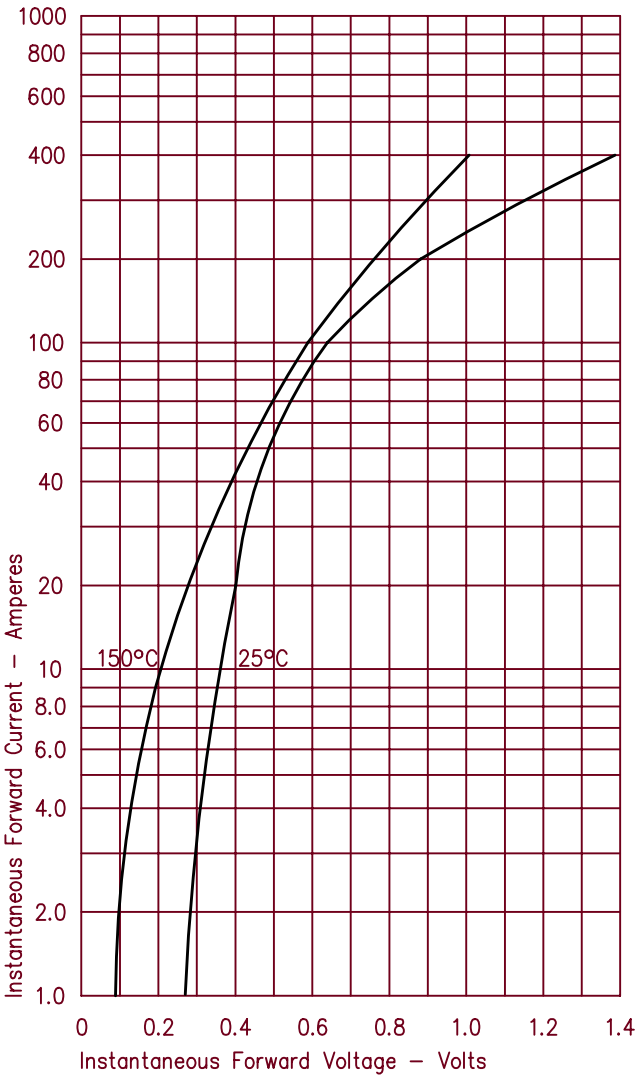

Figure 2
Typical Reverse Characteristics – Per Leg

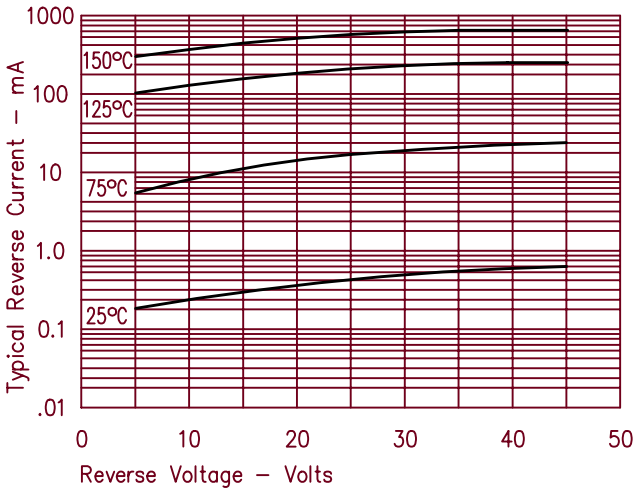

Figure 3
Typical Junction Capacitance – Per Leg

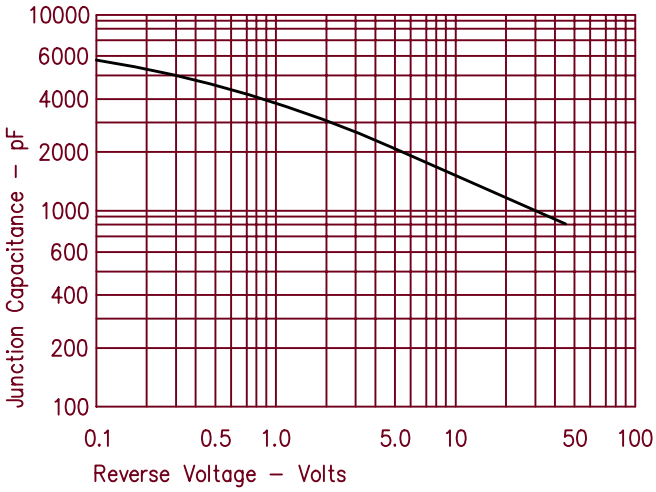

Figure 4
Forward Current Derating – Per Leg

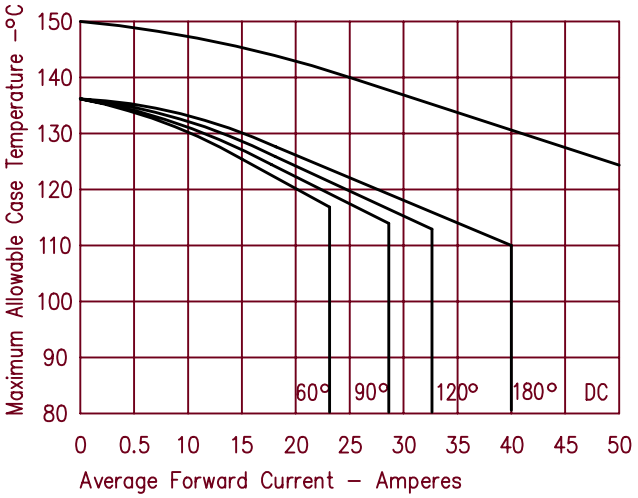

Figure 5
Maximum Forward Power Dissipation – Per Leg