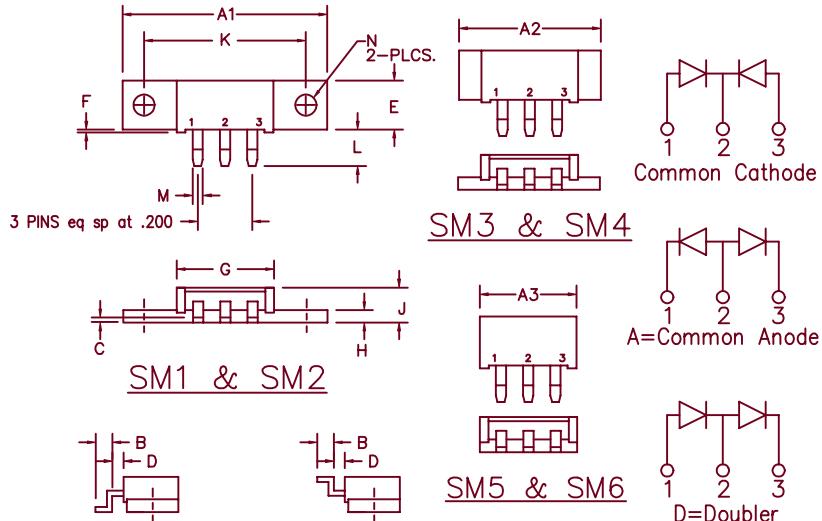


Schottky Power Surface Mount FST81SM1 – SM6 Series



Dim. Inches		Millimeter		
		Minimum	Maximum	Notes
A1	1.490	1.510	37.85	38.35
A2	1.020	1.040	26.12	26.42
A3	.695	.715	17.65	18.16
B	.110	.120	2.79	3.04
C	.027	.037	0.69	0.94
D	.100	.110	2.54	2.79
E	.350	.370	8.89	9.40
F	.015	.025	0.38	0.64
G	.695	.715	17.65	18.16
H	.088	.098	2.24	2.49
J	.240	.260	6.10	6.60
K	1.180	1.195	29.97	30.35
L	.230	.250	5.84	6.35
M	.065	.085	1.65	2.16
N	.151	.161	3.84	4.09 Dia.

Note: Baseplate Common with Pin 2

Microsemi Catalog
Catalog Number

FST8130SM ①②
FST8135SM — —
FST8140SM — —
FST8145SM — —

Working Peak
Reverse Voltage

VRWM
30V
35V
40V
45V

Repetitive Peak
Reverse Voltage

VRRM
30V
35V
40V
45V

- Schottky Barrier Rectifier
- Guard Ring Protection
- Common Cathode Center Tap
- Low Forward Voltage
- 2 X 40 Amperes Avg.
- 150°C Junction Temperature
- Reverse Energy Tested

Note: ① Specify (1–6) to identify package desired

② Specify C—Common Cathode, A—Common Anode, D—Doubler

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

| F(AV) 80 Amps | TC = 110°C, Square wave, R_{θJC} = 0.5°C/W
| F(AV) 40 Amps | TC = 110°C, Square wave, R_{θJC} = 1.0°C/W
| FSM 800 Amps | 8.3 ms, half sine, TJ = 150°C
| R(OV) 2 Amps | f = 1 KHZ, 25°C, 1 usec square wave
| VFM 0.47 volts | FM = 40A: TJ = 150°C*
| VFM 0.53 volts | FM = 40A: TJ = 25°C*
| RM 500 mA | VRRM, TC = 125°C*
| RM 3.0 mA | VRRM, TJ = 25°C
C_J 2100 pF | V_R = 5.0V, TC = 25°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_{θJC}
R_{θJC}
R_{θCS}

–55°C to 175°C
–55°C to 150°C
1.0°C/W Junction to case
0.5°C/W Junction to case
0.3°C/W Case to sink
10 inch pounds maximum (SM1, 2)
SM1–2 0.3 ounce (8.4 grams) typical
SM3–4 0.24 ounce (6.7 grams) typical
SM5–6 0.18 ounce (5.2 grams) typical

FST81SM1 – SM6

Figure 1
Typical Forward Characteristics – Per Leg

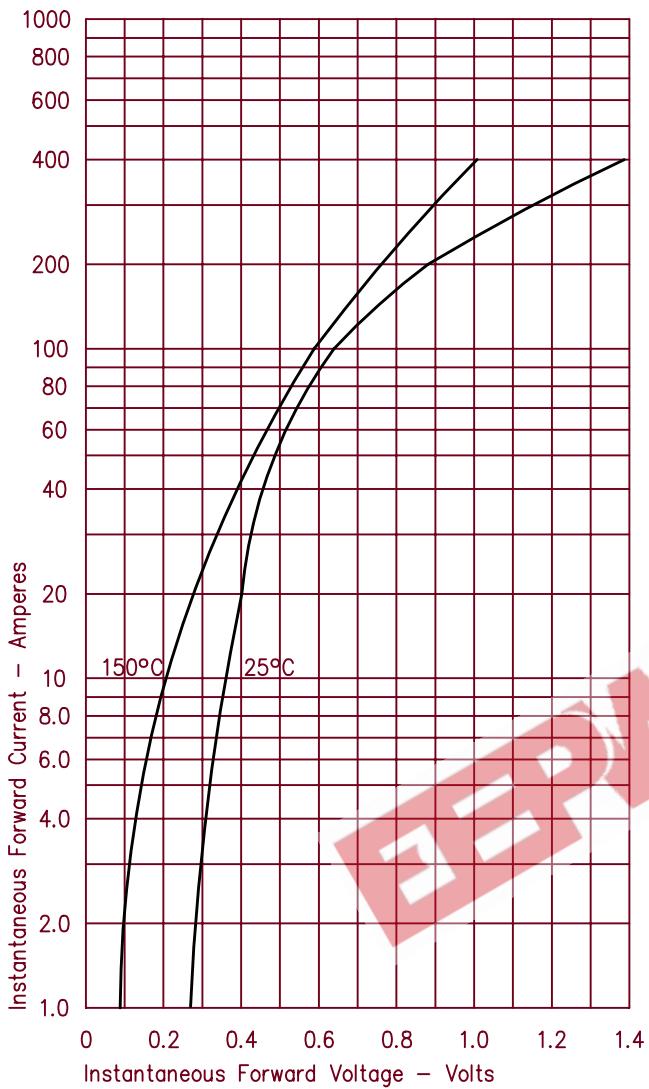


Figure 2
Typical Reverse Characteristics – Per Leg

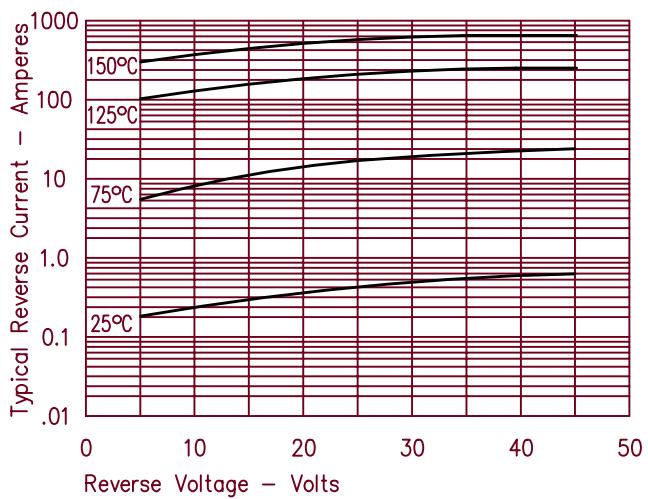


Figure 3
Typical Junction Capacitance – Per Leg

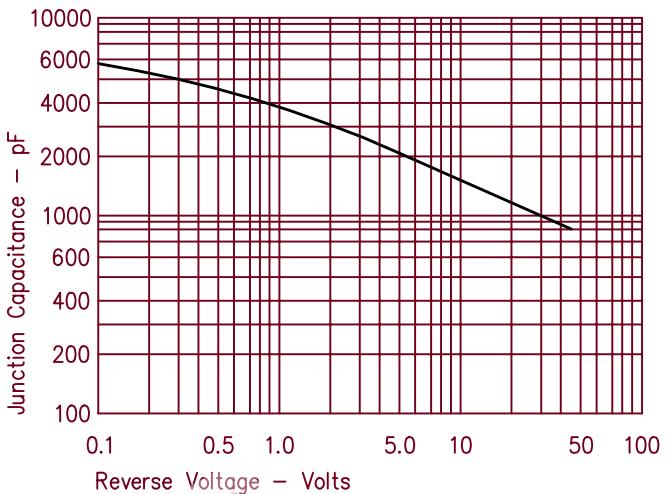


Figure 4
Forward Current Derating – Per Leg



Figure 5
Maximum Forward Power Dissipation – Per Leg

