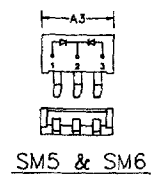
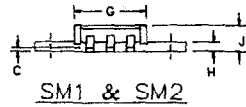
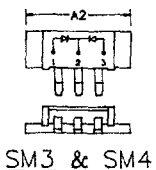
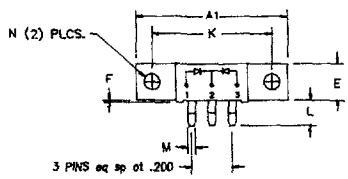


Schottky Power Surface Mount FST81SM1-SM6 Series



TYP. PIN CONFIGURATION FOR SM1, SM3, & SM5
TYP. PIN CONFIGURATION FOR SM2, SM4, & SM6

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A1	1.190	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	.730	.750	5.84	6.35	
M	.065	.085	1.65	2.16	
N	.151	.161	3.84	4.09	Dia.

Microsemi Catalog Catalog Number	Working Peak Reverse Voltage VRWM	Repetitive Peak Reverse Voltage VRRM
FST8130SM ①②	30V	30V
FST8135SM --	35V	35V
FST8140SM --	40V	40V
FST8145SM --	45V	45V

Note: ① Specify (1-6) to identify package desired
② Specify C-Common Cathode, A-Common Anode, D-Doubler

- 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

Electrical Characteristics		
Average forward current per pkg	IF(AV) 80 Amps	TC = 110°C, Square wave, RθJC = 0.5°C/W
Average forward current per leg	IF(AV) 40 Amps	TC = 110°C, Square wave, RθJC = 1.0°C/W
Maximum surge current per leg	IFSM 800 Amps	8.3 ms, half sine, TJ = 150°C
Max repetitive peak reverse current per leg	IR(OV) 2 Amps	f = 1 KHZ, 25°C, 1 usec square wave
Max peak forward voltage per leg	VFM 0.47 volts	IFM = 40A; TJ = 150°C*
Max peak forward voltage per leg	VFM 0.53 volts	IFM = 40A; TJ = 25°C*
Max peak reverse current per leg	IRM 500 mA	VRRM, TC = 125°C*
Typical reverse current per leg	IRM 1.5 mA	VRRM, TJ = 25°C
Typical junction capacitance	CJ 2100 pF	VR = 5.0V, TC = 25°C

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

Thermal and Mechanical Characteristics		
Storage temp range	TS1G	-40°C to 175°C
Operating junction temp range	TJ	-40°C to 150°C
Max thermal resistance per leg	RθJC	1.0°C/W Junction to case
per package	RθCS	0.5°C/W Junction to case
Typical thermal resistance	RθCS	0.3°C/W Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		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

PH: 303-469-2161
FAX: 303-466-3775

Microsemi Corp.
Colorado

FST81SM1 — SM6

Figure 1
Maximum Forward Characteristics — Per Leg

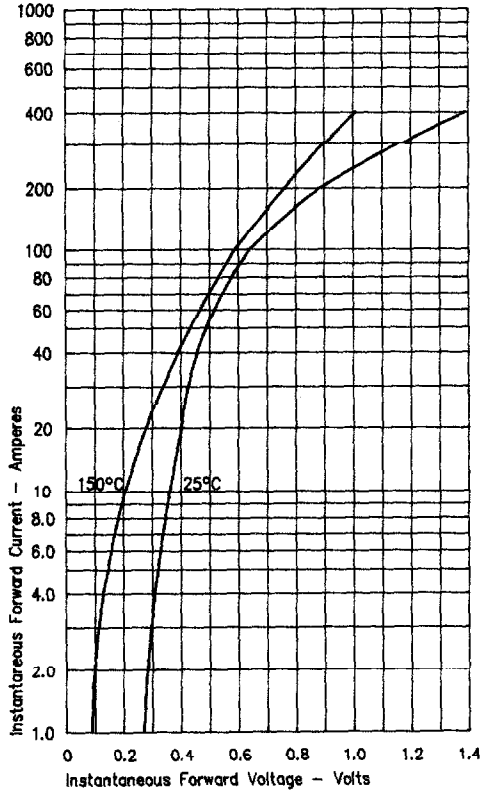


Figure 2
Typical Reverse Characteristics — Per Leg

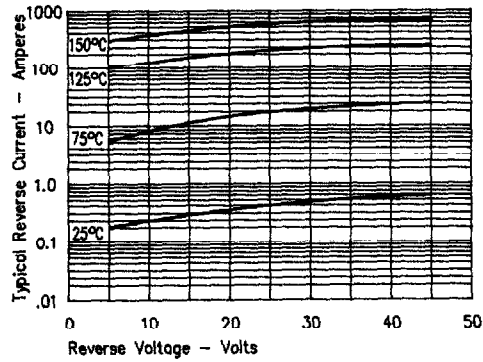


Figure 3
Typical Junction Capacitance — Per Leg

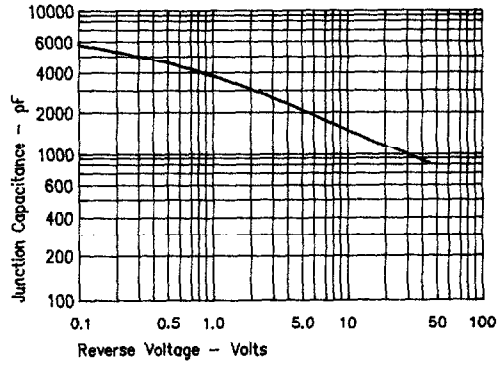


Figure 4
Forward Current Derating — Per Leg

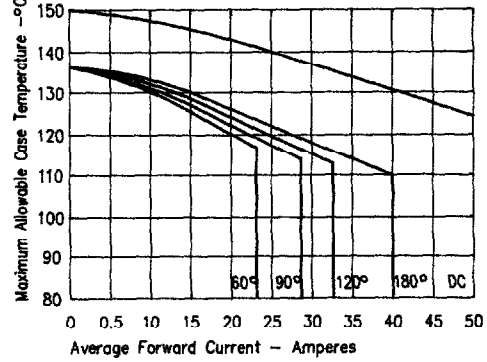


Figure 5
Maximum Forward Power Dissipation — Per Leg

