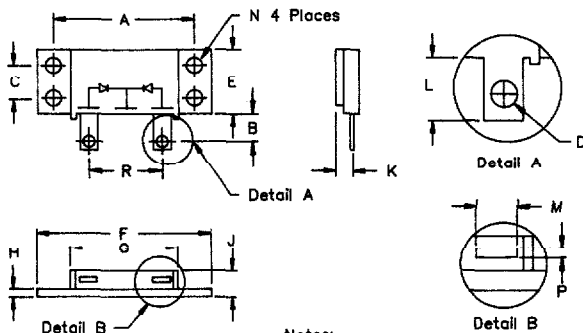


Schottky PowerMod FST 171



Notes:
Baseplate: Nickel plated copper,
common cathode
Pins: Nickel plated copper

Dim.	Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
A	1.995	2.005	50.67	50.93	
B	0.300	0.325	7.62	8.26	
C	0.495	0.505	12.57	12.83	
D	0.182	0.192	4.62	4.88	Dia.
E	0.990	1.010	25.15	25.65	
F	2.390	2.410	60.71	61.21	
G	1.490	1.510	37.85	38.35	
H	0.120	0.130	3.05	3.30	
J	---	0.400	---	10.16	
K	0.240	0.260	6.10	6.60	to Lead Cl
L	0.490	0.510	12.45	12.95	
M	0.330	0.350	8.38	8.90	
N	0.175	0.195	4.45	4.95	Dia.
P	0.035	0.045	0.89	1.14	
R	0.890	0.910	22.61	23.11	

MD2CC

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST17135*	35V	35V
FST17140*	40V	40V
FST17145*	45V	45V
FST17150*	50V	50V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- High Surge Capacity
- VRRM - 35 to 50 Volts
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 170 Amps	$T_C = 120^\circ C$, Square wave, $R_{\theta JC} = 0.425^\circ C/W$
Average forward current per leg	$I_F(AV)$ 85 Amps	$T_C = 115^\circ C$, Square wave, $R_{\theta JC} = 0.85^\circ C/W$
Maximum surge current per leg	I_{FSM} 1200 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 μ sec Square wave
Max peak forward voltage per leg	VFM .58 Volts	IFM = 80A: $T_J = 175^\circ C^*$
Max peak forward voltage per leg	VFM .74 Volts	IFM = 80A: $T_J = 25^\circ C^*$
Max peak reverse current per leg	IRM 60 mA	VRRM, $T_J = 125^\circ C^*$
Max peak reverse current per leg	IRM 2 mA	VRRM, $T_J = 25^\circ C$
Typical reverse current per leg	IRM 20 μ A	VRRM, $T_J = 25^\circ C$
Typical junction capacitance	C_J 2300 pF	VR = 5.0V, $T_J = 25^\circ C$

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	TSTG	$-40^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-40^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.85^\circ C/W$ Junction to case
per package	$R_{\theta JC}$	$0.425^\circ C/W$ Junction to case
Typical thermal resistance per leg	$R_{\theta JC}$	$0.8^\circ C/W$ Junction to case
Typical thermal resistance	$R_{\theta CS}$	$0.1^\circ C/W$ Case to sink
Mounting torque		15-20 inch pounds maximum
Weight		2.5 ounces (71 grams) typical

Microsemi Corp.
Colorado

FST 171



Figure 1
Typical Forward Characteristics - Per Leg

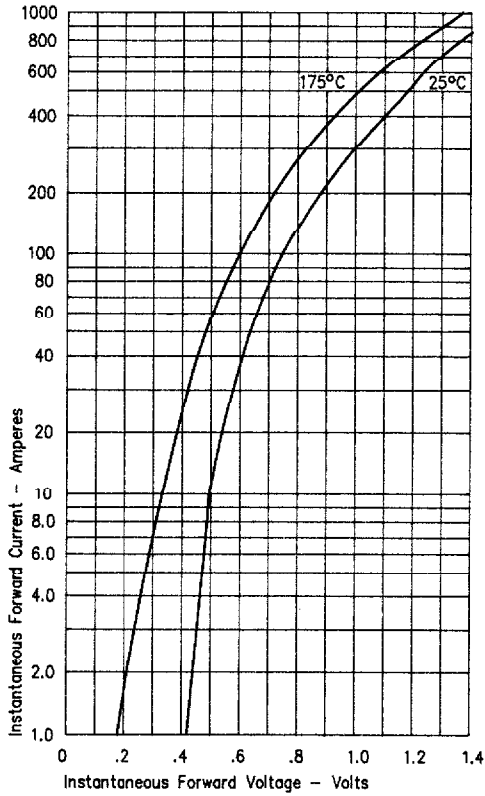


Figure 3
Typical Junction Capacitance - Per Leg

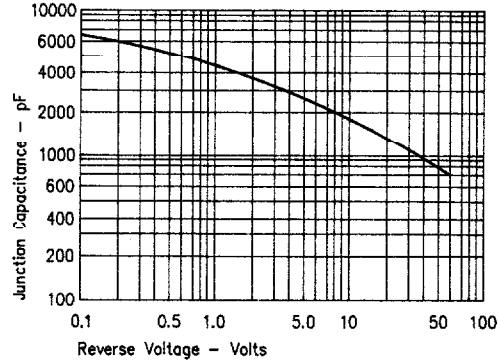


Figure 4
Forward Current Derating - Per Leg

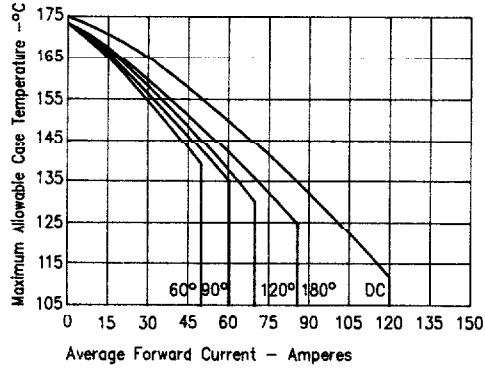


Figure 2
Typical Reverse Characteristics - Per Leg

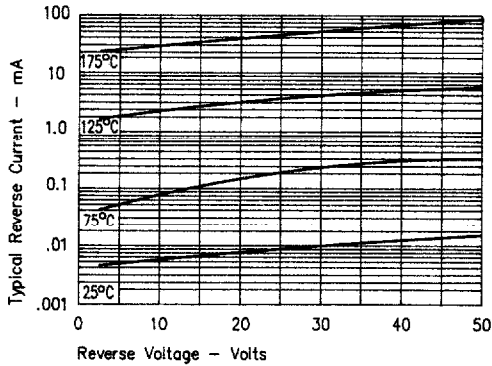


Figure 5
Maximum Forward Power Dissipation - Per Leg

