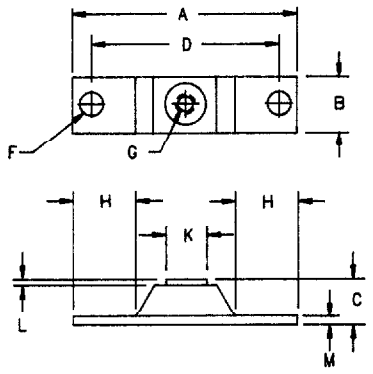
Silicon Power Rectifier
SDM150



Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
A	---	2.300	---	58.42	
B	0.700	0.800	17.78	20.32	
C	---	0.625	---	15.87	
D	1.775 BSC		45.08 BSC		
F	0.280	0.310	6.86	7.11	Dia.
G	1/4-20 UNC				
H	0.600	---	15.24	---	
K	0.490	0.510			
L	---	0.050	---	1.27	
M	0.120	0.130	3.05	3.30	

E

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SDM15002*	200V	200V
SDM15004*	400V	400V
SDM15006*	600V	600V
SDM15008*	800V	800V
SDM15010*	1000V	1000V
SDM15012*	1200V	1200V

*Add Suffix A for Common Anode

- Compact Package
- Glass Passivated Die
- 150A
- Non-Isolated Baseplate
- Low Profile

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 150 Amps	T_C = 120°C half sine, $R_{\theta JC}$ = 0.3°C/W
Maximum surge current	I_{FSM} 2500 Amps	8.3 ms, half sine, T_J = 175°C
Max I^2t for fusing	I^2t 26000 A^2s	
Max peak forward voltage	V_{FM} 1.1 Volts	I_{FM} = 200A; T_J = 25°C*
Max peak forward voltage	V_{FM} 1.0 Volts	I_{FM} = 200A; T_J = 175°C*
Max peak reverse current	I_{RM} 5 mA	V_{RRM}, T_J = 150°C
Max peak reverse current	I_{RM} 200 µA	V_{RRM}, T_J = 25°C
Typical reverse current	I_{RM} 3.0 µA	V_{RRM}, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STC}	-40°C to 175°C
Operating junction temp range	T_J	-40°C to 175°C
Max thermal resistance	$R_{\theta JC}$	0.3°C/W Junction to case
Typical thermal resistance	$R_{\theta CS}$	0.08°C/W Case to sink
Terminal Torque		50 inch pounds maximum
Mounting Base Torque		40 inch pounds minimum
Typical Weight		1.48 ounces (42 grams) typical

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Microsemi Corp.
Colorado

SDM150

Figure 1
Typical Forward Characteristics

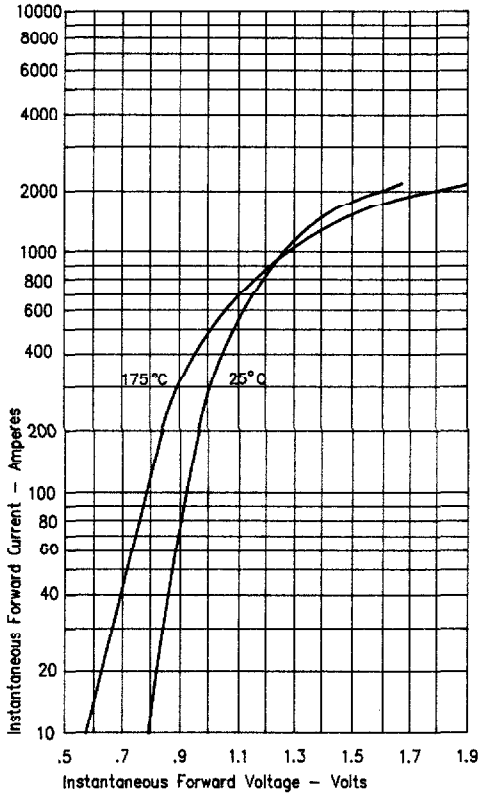

Figure 2
Typical Reverse Characteristics

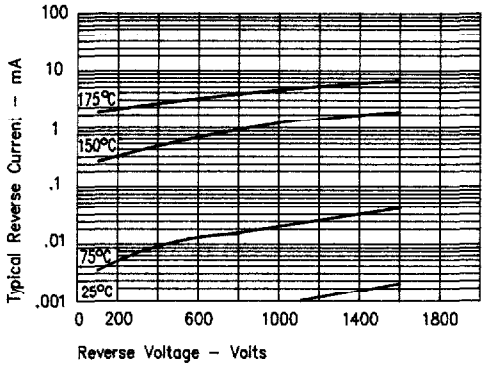

Figure 3
Forward Current Derating

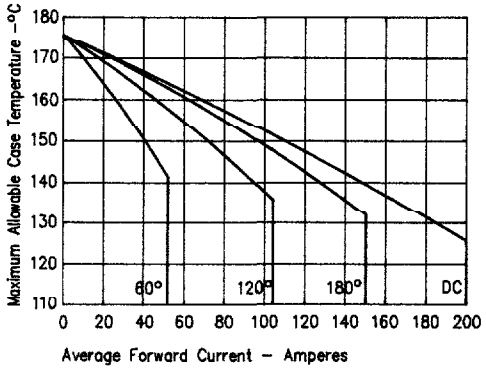

Figure 4
Maximum Forward Power Dissipation

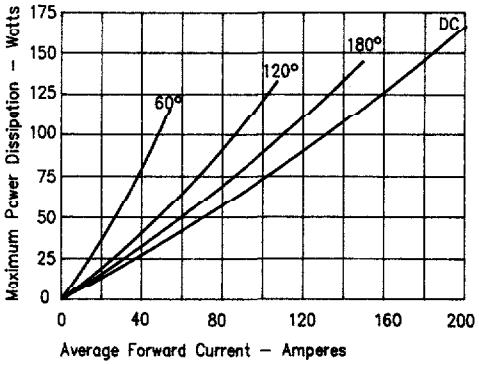

Figure 5
Transient Thermal Impedance

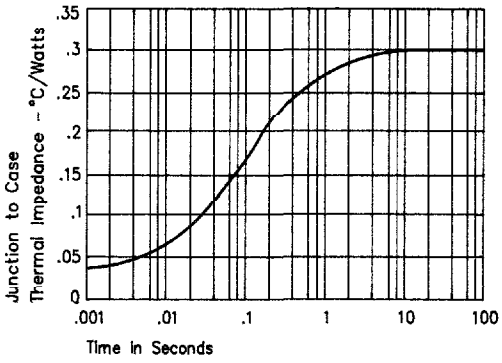

Figure 6
Maximum Nonrepetitive Surge Current