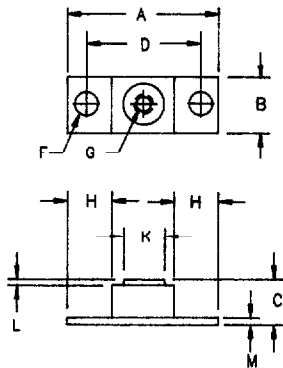


Silicon Power Rectifier SDM300



Dim. Inches		Millimeters		Notes
Min.	Max.	Min.	Max.	
A	---	2.650	---	67.31
B	1.240	1.260	31.49	32.00
C	---	.925	---	23.49
D	2.00	BSC	50.80	BSC
F	0.320	0.340	8.13	8.64 Dia.
G	---	5/16-18	UNC	---
H	0.630	---	16.00	---
K	0.610	0.640	15.49	16.26
L	---	.100	---	2.54
M	0.182	0.192	4.62	4.88

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SDM30002*	200V	200V
SDM30004*	400V	400V
SDM30006*	600V	600V
SDM30008*	800V	800V
SDM30010*	1000V	1000V
SDM30012*	1200V	1200V

*Add Suffix A for Common Anode

- Compact Package
- Glass Passivated Die
- 300 Amp Current Rating
- Non-Isolated Baseplate
- Low Profile

Electrical Characteristics

Average forward current	$I_F(AV)$ 300 Amps	$T_C = 130^\circ C$, half sine, $R_{\theta JC} = 0.15^\circ C/W$
Maximum surge current	I_{FSM} 5500 Amps	8.3 ms, half sine, $T_J = 175^\circ C$
Max I^2t for fusing	I^2t 125990 A^2s	
Max peak forward voltage	V_{FM} 1.25 Volts	$I_{FM} = 1000A: T_J = 25^\circ C^*$
Max peak forward voltage	V_{FM} 1.20 Volts	$I_{FM} = 1000A: T_J = 175^\circ C^*$
Max peak reverse current	I_{RM} 10 mA	$V_{RRM}, T_J = 150^\circ C^*$
Max peak reverse current	I_{RM} 250 μA	$V_{RRM}, T_J = 25^\circ C^*$
Typical reverse current	I_{RM} 17 μA	$V_{RRM}, T_J = 25^\circ C^*$

*Pulse test: Pulse width 8.33 μsec , Duty cycle <1%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-40^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-40^\circ C$ to $175^\circ C$
Max thermal resistance	$R_{\theta JC}$	0.15 $^\circ C/W$ Junction to case
Typical thermal resistance	$R_{\theta CS}$	0.04 $^\circ C/W$ Case to sink
Terminal Torque		75 inch pounds maximum
Mounting Base Torque		40 inch pounds maximum
Typical Weight		4.93 ounces (140 grams) typical

Microsemi Corp.
Colorado

SDM300

Figure 1
Typical Forward Characteristics

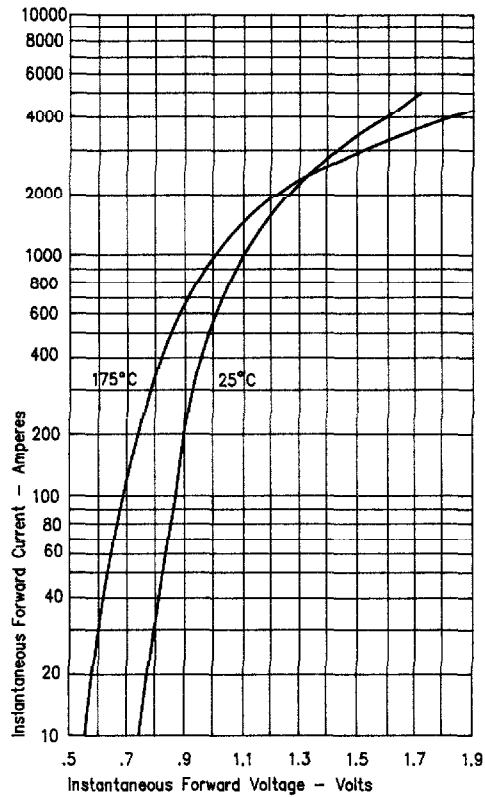


Figure 3
Forward Current Derating

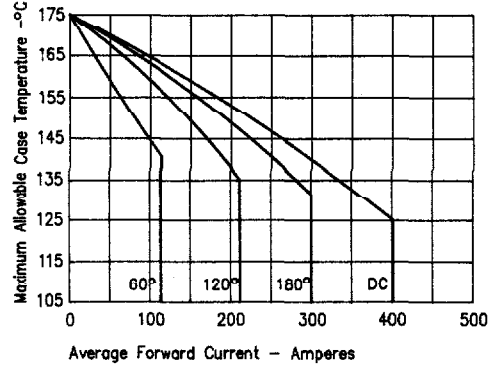


Figure 4
Maximum Forward Power Dissipation

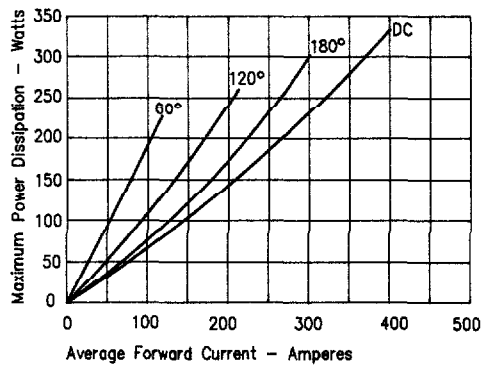


Figure 2
Typical Reverse Characteristics

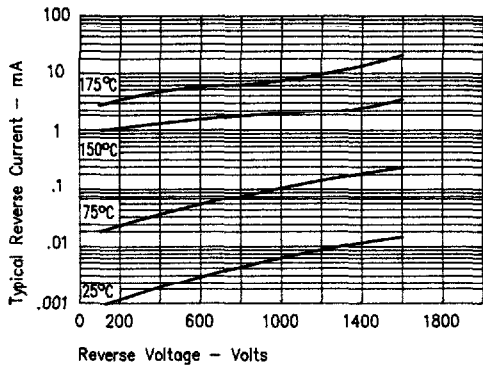
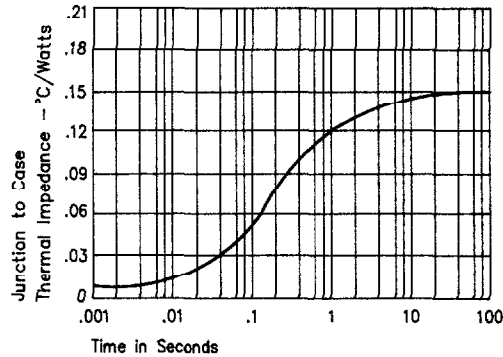


Figure 5
Transient Thermal Impedance



E

SDM300

