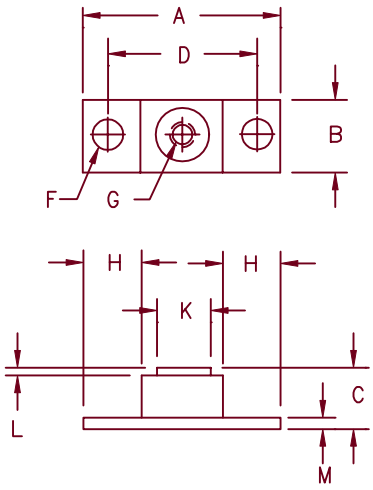
Silicon Power Rectifier
SDM300



Standard Polarity:
Base plate is cathode
Reverse Polarity:
Base plate is anode

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
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
SDM30014*	1400V	1400V
SDM30016*	1600V	1600V

*Change S to R for Reverse Polarity

- Compact Package
- Glass Passivated Die
- 300 Amp Current Rating
- Non-Isolated Baseplate
- Low Profile
- VRRM 200-1600 Volts

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 300 Amps	T_C = 130°C, half sine, $R_{\theta JC}$ = 0.15°C/W
Maximum surge current	I_{FSM} 5500 Amps	8.3 ms, half sine, T_J = 175°C
Max I^2t for fusing	I^2t 125990 A^2s	
Max peak forward voltage	V_{FM} 1.1 Volts	I_{FM} = 300A; T_J = 25°C*
Max peak reverse current	I_{RM} 10 mA	V_{RRM}, T_J = 150°C*
Max peak reverse current	I_{RM} 75 µA	V_{RRM}, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance	$R_{\theta JC}$	0.15°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.04°C/W Case to sink
Terminal Torque		60-75 inch pounds
Mounting Base Torque		30-40 inch pounds
Typical Weight		4.93 ounces (140 grams) typical

1-9-01 Rev. 1

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Broomfield, CO. 80020
PH: (303) 469-2161
FAX: (303) 466-3775
www.microsemi.com

SDM300

Figure 1
Typical Forward Characteristics

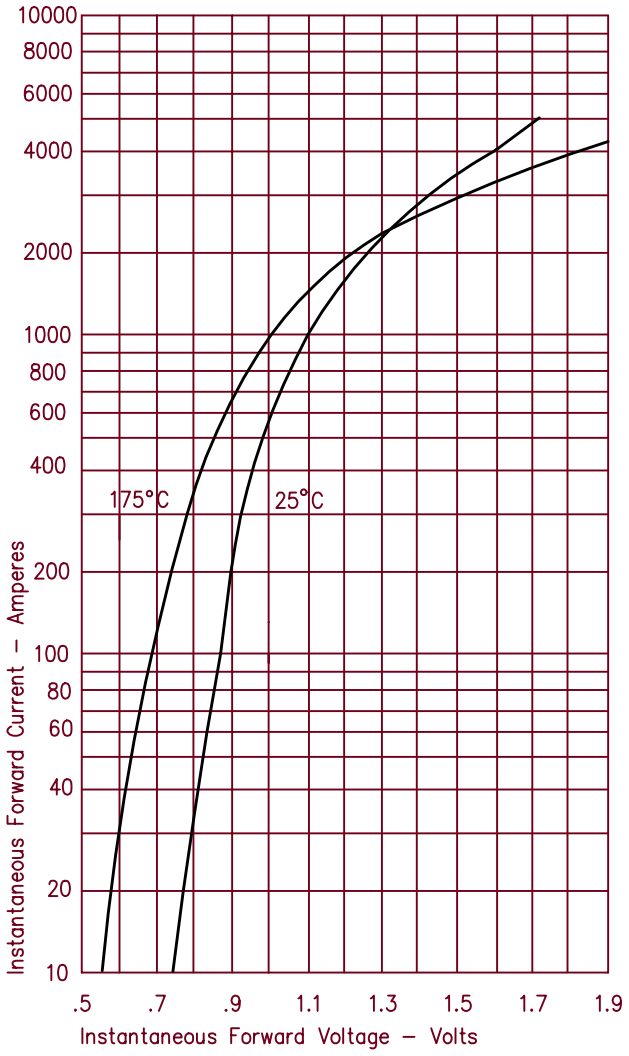


Figure 2
Typical Reverse Characteristics

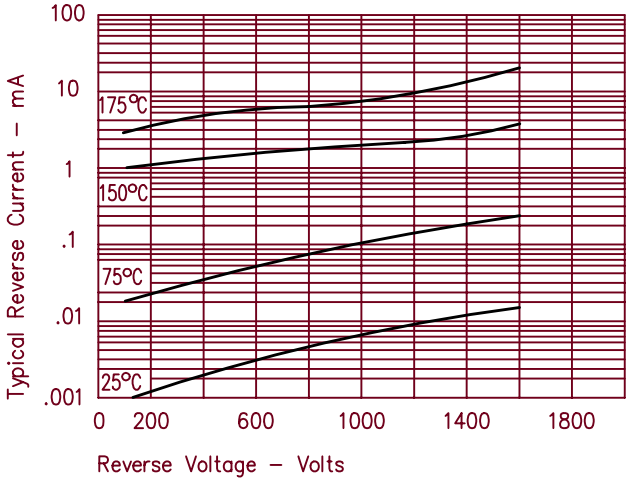


Figure 3
Forward Current Derating

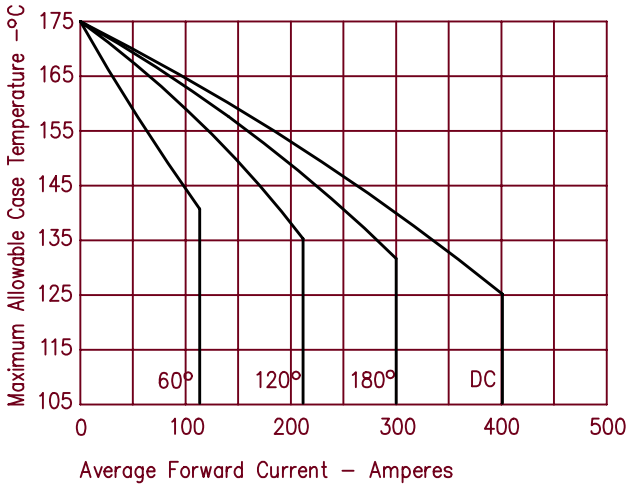


Figure 4
Maximum Forward Power Dissipation

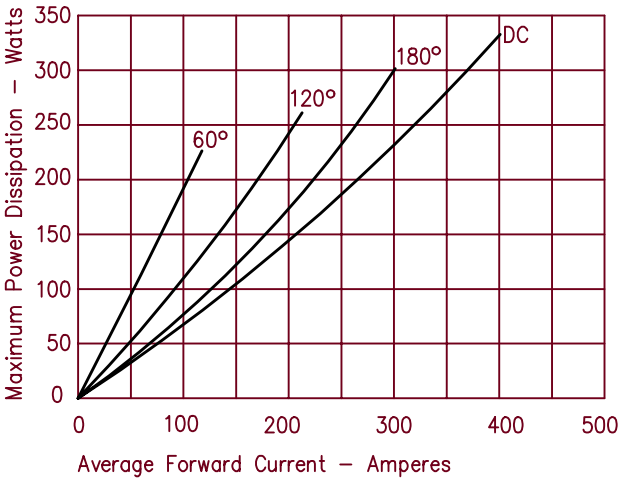
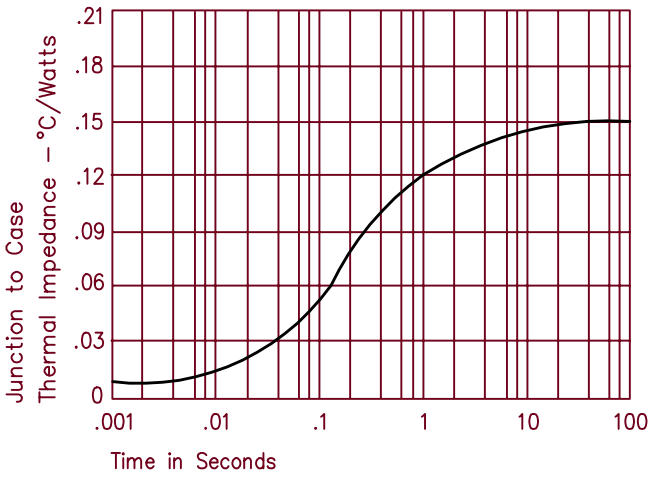


Figure 5
Transient Thermal Impedance



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