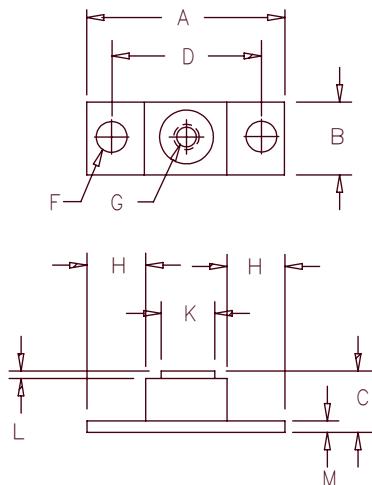


Silicon Power Rectifier SDM300



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		
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 Reverse Voltage	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
- ROHS Compliant

Electrical Characteristics

Average forward current
Maximum surge current
Max I^2t for fusing
Max peak forward voltage
Max peak reverse current
Max peak reverse current

$I_F(AV)$ 300 Amps
 I_{FSM} 5500 Amps
 I^2t 125990 A²s
 V_{FM} 1.1 Volts
 I_{RM} 10 mA
 I_{RM} 75 μ A

T_C = 130°C, half sine, $R_{\theta JC}$ = 0.15°C/W
8.3 ms, half sine, T_J = 175°C

I_{FM} = 300A; T_J = 25°C*
VRRM, T_J = 150°C*
VRRM, T_J = 25°C

*Pulse test: Pulse width 8.33 μ sec, 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

SDM300

Figure 1
Typical Forward Characteristics

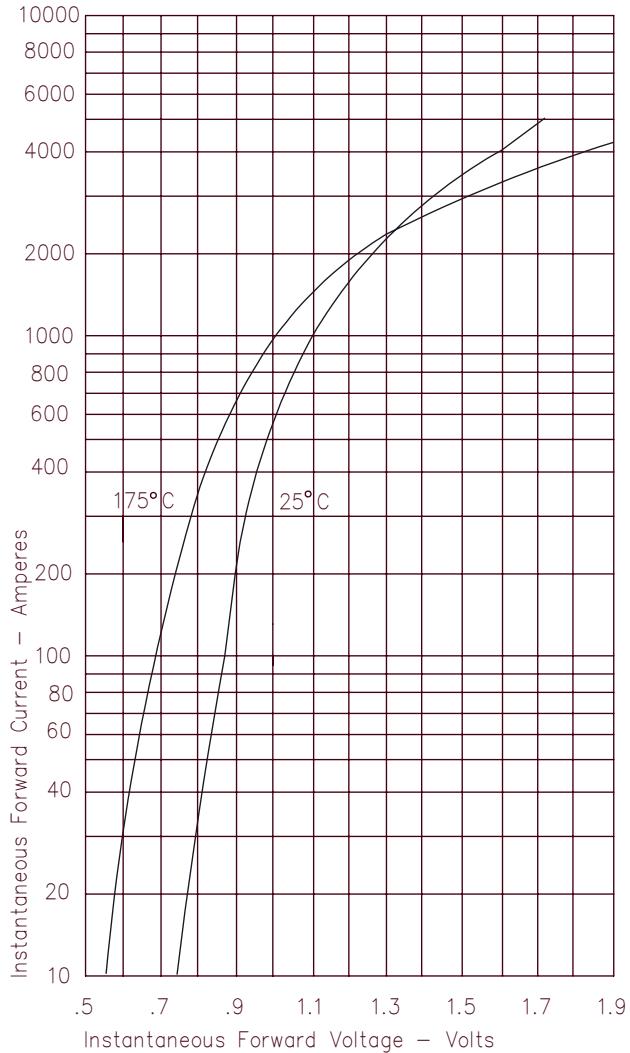


Figure 2
Typical Reverse Characteristics

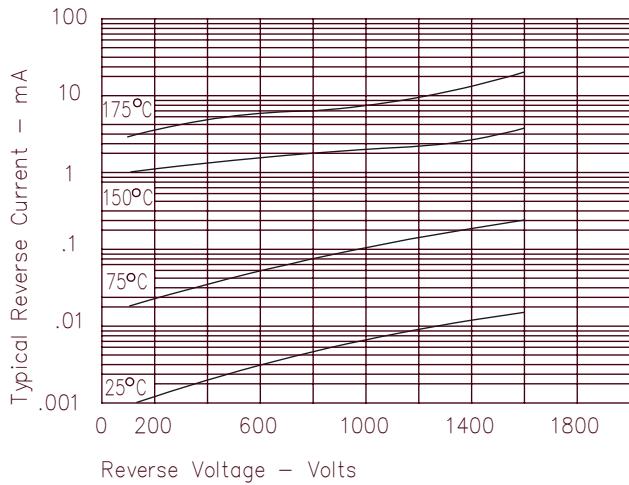


Figure 3
Forward Current Derating

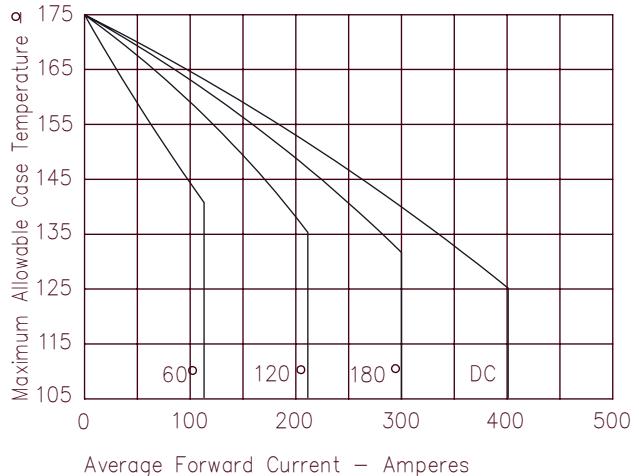


Figure 4
Maximum Forward Power Dissipation

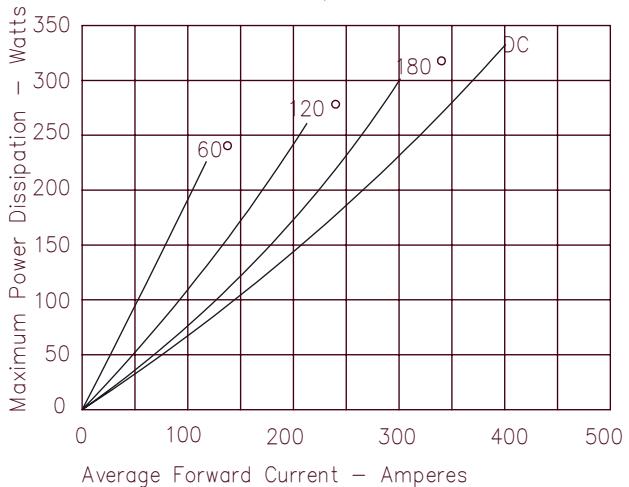


Figure 5
Transient Thermal Impedance

