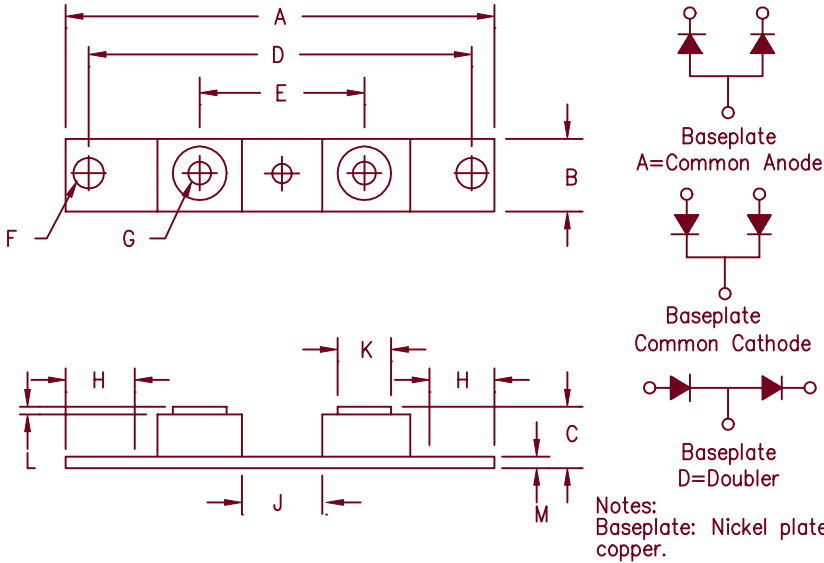


# Twin Diode Module TDM300



Dim.	Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
A	---	4.600	---	116.84	
B	1.240	1.260	31.49	32.00	
C	---	.925	---	23.49	
D	3.99 BSC		101.34 BSC		
E	1.98 BSC		50.29 BSC		
F	0.320	0.340	8.13	8.64	Dia.
G	---	---	---	---	5/16-18
H	0.630	---	16.00	---	
J	0.680	0.780	17.27	19.81	
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
TDM30002*	200V	200V
TDM30004*	400V	400V
TDM30006*	600V	600V
TDM30008*	800V	800V
TDM30010*	1000V	1000V
TDM30012*	1200V	1200V
TDM30014*	1400V	1400V
TDM30016*	1600V	1600V

\*Add Suffix A for Common Anode, D for Doubler

- Compact Package
- Glass Passivated Die
- 2 x 300 Amp Current Rating
- Simplifies Circuit Assembly
- Non-Isolated Baseplate
- VRRM 200-1600 Volts

## Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 600 Amps	$T_C = 130^\circ\text{C}$ , half sine, $R_{\theta JC} = 0.08^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 300 Amps	$T_C = 130^\circ\text{C}$ , half sine, $R_{\theta JC} = 0.15^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 5500 Amps	8.3 ms, half sine, $T_J = 175^\circ\text{C}$
Max $I^2t$ for fusing	$I^2t$ 125990 $\text{A}^2\text{s}$	
Max peak forward voltage per leg	$V_{FM}$ 1.1 Volts	$I_{FM} = 300\text{A}; T_J = 25^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 10 mA	$V_{RRM}, T_J = 150^\circ\text{C}$
Max peak reverse current per leg	$I_{RM}$ 75 $\mu\text{A}$	$V_{RRM}, T_J = 25^\circ\text{C}^*$

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

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$0.15^\circ\text{C/W}$ Junction to case
Typical thermal resistance per leg (greased)	$R_{\theta CS}$	$0.04^\circ\text{C/W}$ Case to sink
Terminal Torque		60-75 inch pounds
Mounting Base Torque (outside holes)		30-40 inch pounds
Mounting Base Torque (center hole)		8-10 inch pounds
center hole must be torqued first		
Weight		9.3 ounces (263.7 grams) typical

# TDM300

Figure 1  
Typical Forward Characteristics – Per Leg

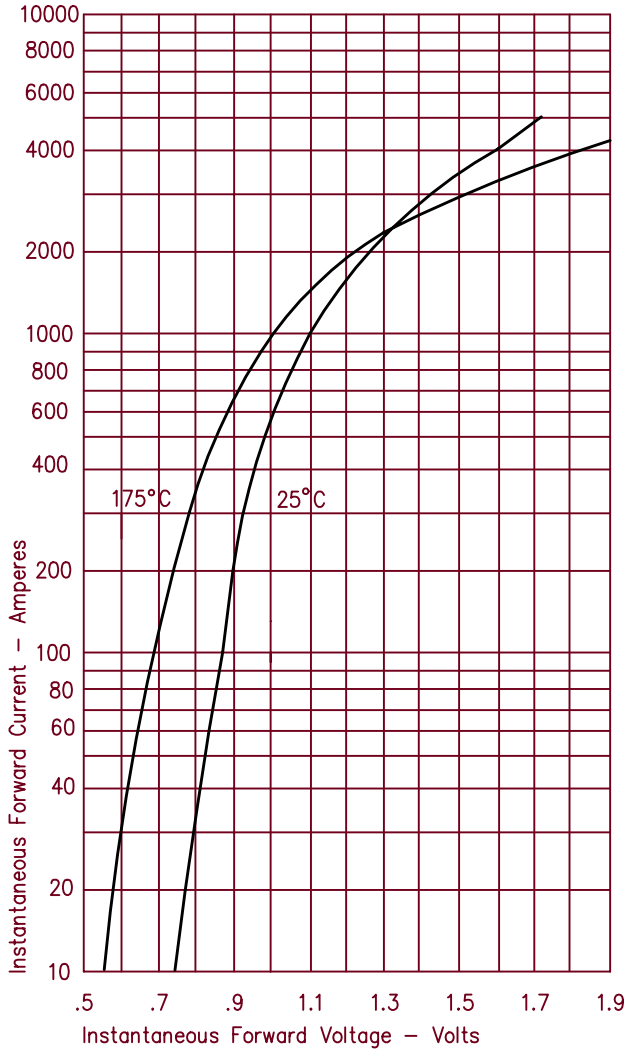


Figure 3  
Forward Current Derating – Per Leg

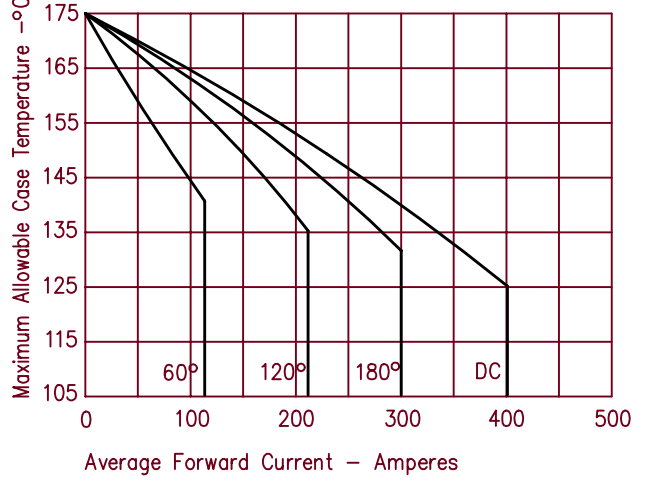


Figure 4  
Maximum Forward Power Dissipation – Per Leg

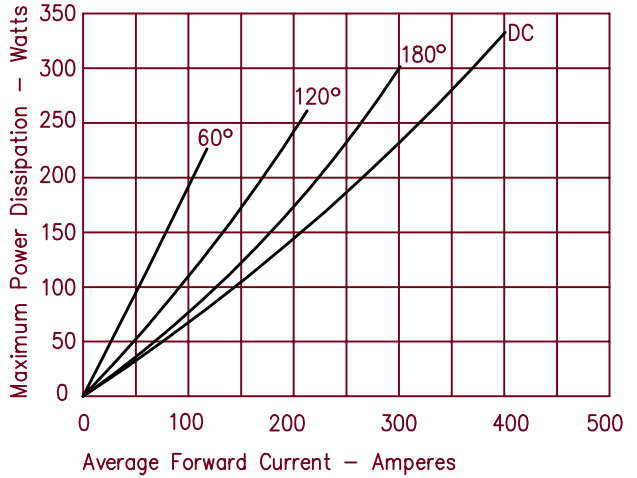


Figure 2  
Typical Reverse Characteristics – Per Leg

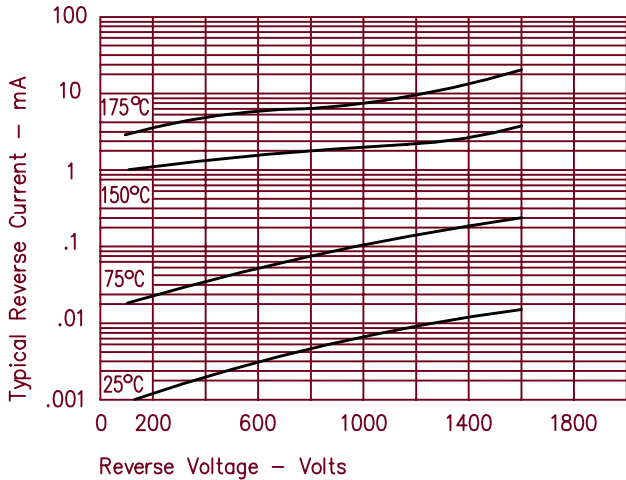


Figure 5  
Transient Thermal Impedance – Per Leg

