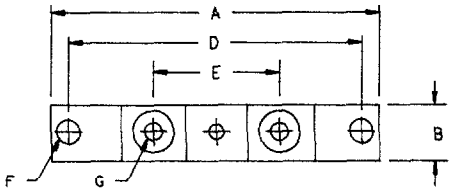
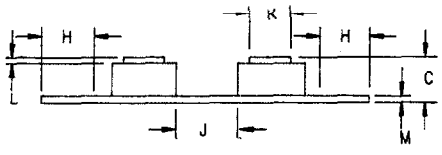
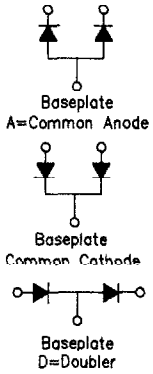
Twin Diode Module
TDM300







Baseplate
A=Common Anode

Baseplate
Common Cathode

Baseplate
D=Doubler

Notes:
Baseplate: Nickel plated copper; common cathode

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
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

*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

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 600 Amps	T_C = 130°C, half sine, $R_{\theta JC}$ = 0.08°C/W
Average forward current per leg	$I_{F(AV)}$ 300 Amps	T_C = 130°C, half sine, $R_{\theta JC}$ = 0.15°C/W
Maximum surge current per leg	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 per leg	V_{FM} 1.25 Volts	I_{FM} = 1000A; T_J = 25°C*
Max peak forward voltage per leg	V_{FM} 1.20 Volts	I_{FM} = 1000A; T_J = 175°C*
Max peak reverse current per leg	I_{RM} 10 mA	V_{RRM}, T_J = 150°C
Max peak reverse current per leg	I_{RM} 250 uA	V_{RRM}, T_J = 25°C*
Typical reverse current per leg	I_{RM} 17 uA	V_{RRM}, T_J = 25°C*

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

Thermal and Mechanical Characteristics

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

Microsemi Corp.
Colorado

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TDM300

Figure 1
Typical Forward Characteristics – Per Leg

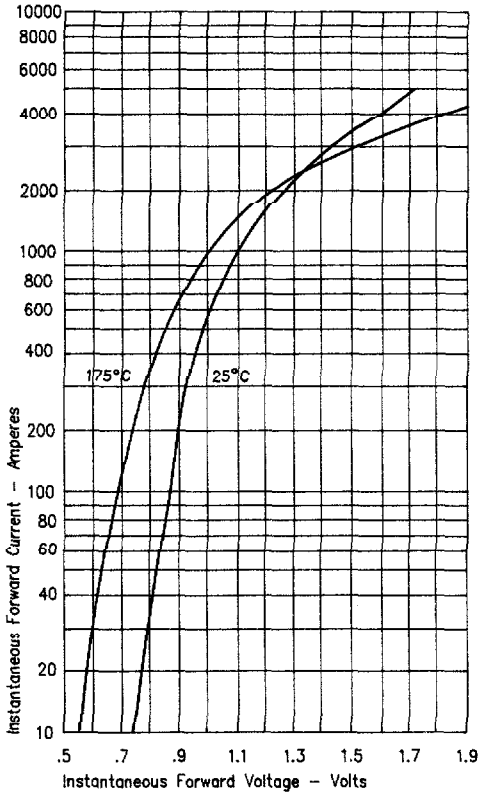

Figure 2
Typical Reverse Characteristics – Per Leg

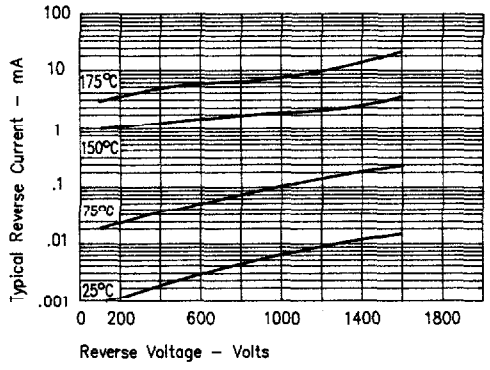

Figure 3
Forward Current Derating – Per Leg

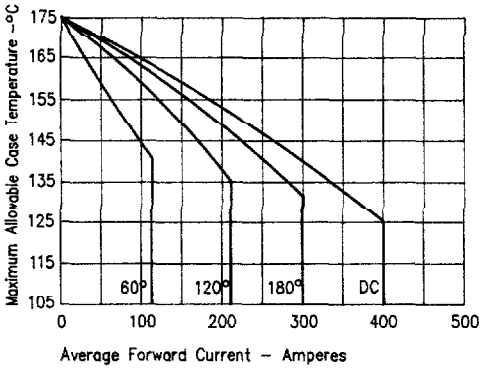

Figure 4
Maximum Forward Power Dissipation – Per Leg

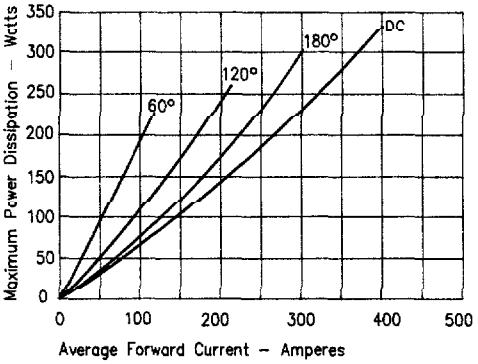

Figure 5
Transient Thermal Impedance – Per Leg

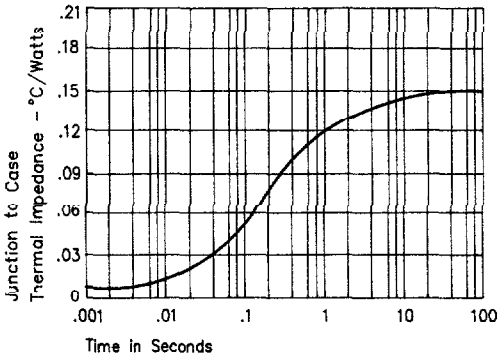

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Figure 6
Maximum Nonrepetitive Surge Current – Per Leg