MAXIMUM RATINGS (Per Leg)

Rating	Symbol	MUR3020WT	MUR3040WT	MUR3060WT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	400	600	V
Average Rectified Forward Current @ 145°C Total Device	$I_{F(AV)}$	15 30			A
Peak Repetitive Surge Current (Rated V_R, Square Wave, 20 kHz, T_C = 145°C)	I_{FM}	30			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I_{FSM}	200	150	150	A
Operating Junction and Storage Temperature	T_J, T_{stg}	– 65 to +175			°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

THERMAL CHARACTERISTICS (Per Leg)

Rating	Symbol	MUR3020WT	MUR3040WT	MUR3060WT	Unit
Maximum Thermal Resistance, – Junction–to–Case – Junction–to–Ambient	 $R_{\theta JC}$ $R_{\theta JA}$	 1.5 40			°C/W

ELECTRICAL CHARACTERISTICS (Per Leg)

Rating	Symbol	MUR3020WT	MUR3040WT	MUR3060WT	Unit
Maximum Instantaneous Forward Voltage (Note 1) (I_F = 15 Amp, T_C = 150°C) (I_F = 15 Amp, T_C = 25°C)	V_F	 0.85 1.05	 1.12 1.25	 1.4 1.7	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, T_J = 150°C) (Rated DC Voltage, T_J = 25°C)	i_R	 500 10	 500 10	 1000 10	μA
Maximum Reverse Recovery Time (i_F = 1.0 A, di/dt = 50 Amps/μs)	t_{rr}	35	60	60	ns
Typical Peak Reverse Recovery Current (I_F = 1.0 A, di/dt = 50 A/μs)	I_{RM}	0.7			A

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

MUR3020WT

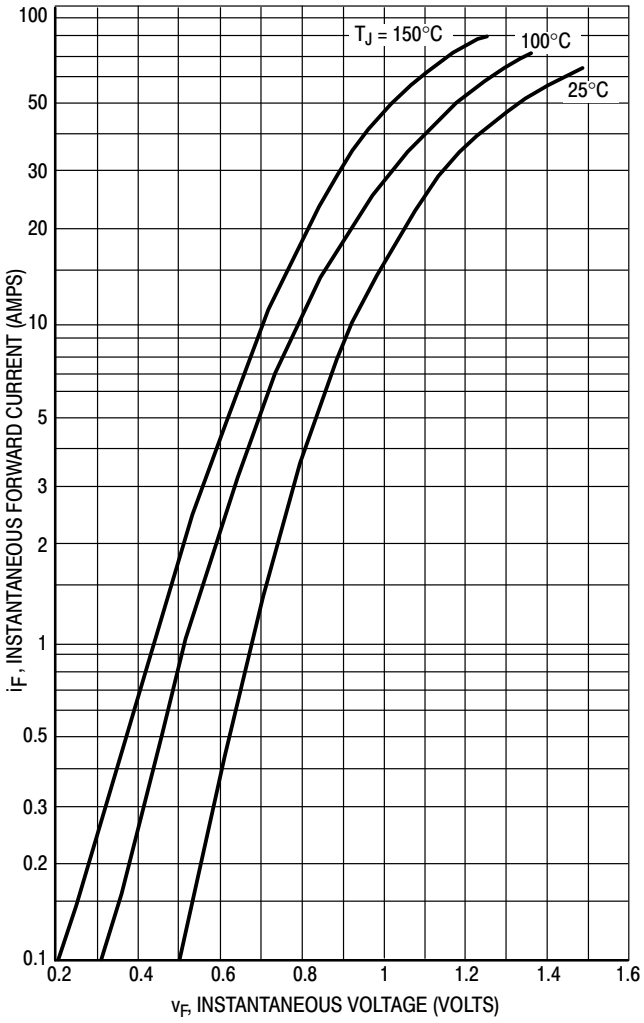
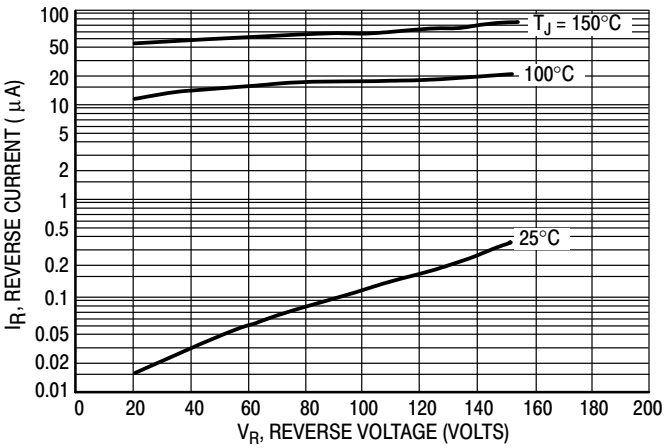


Figure 1. Typical Forward Voltage (Per Leg)



*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V_R is sufficiently below rated V_R.

Figure 2. Typical Reverse Current (Per Leg)*

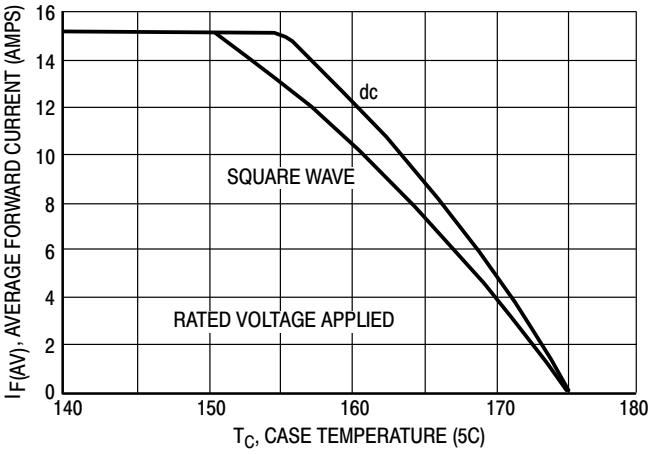


Figure 3. Current Derating, Case (Per Leg)

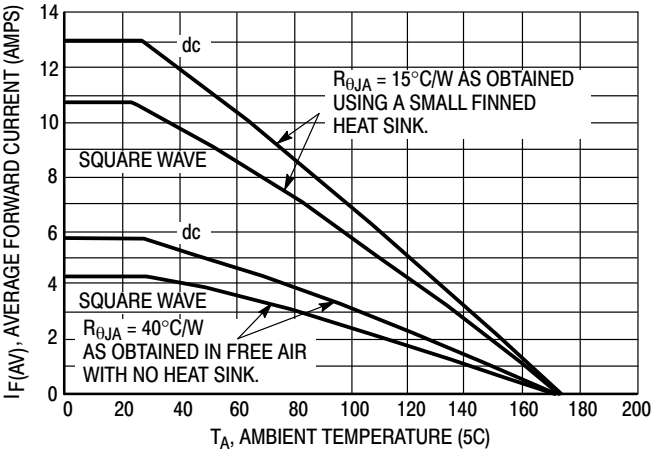


Figure 4. Current Derating, Ambient (Per Leg)

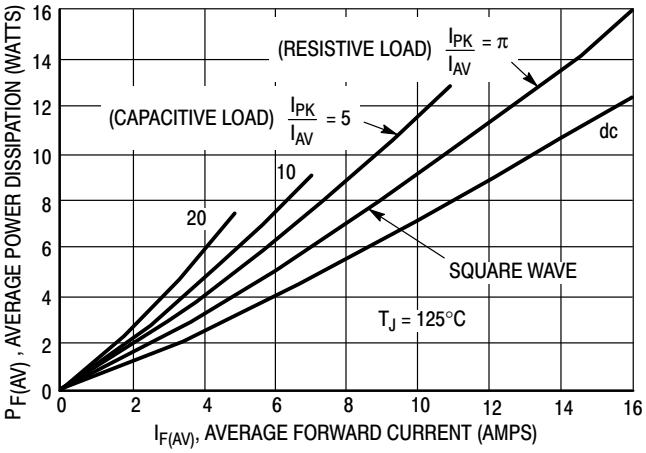


Figure 5. Power Dissipation (Per Leg)

MUR3040WTG

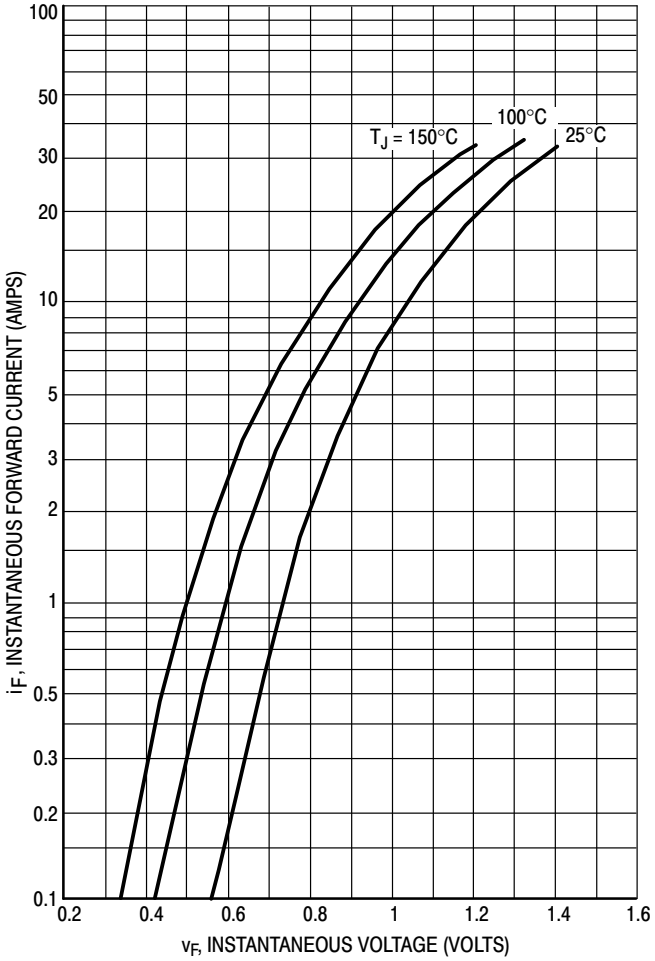
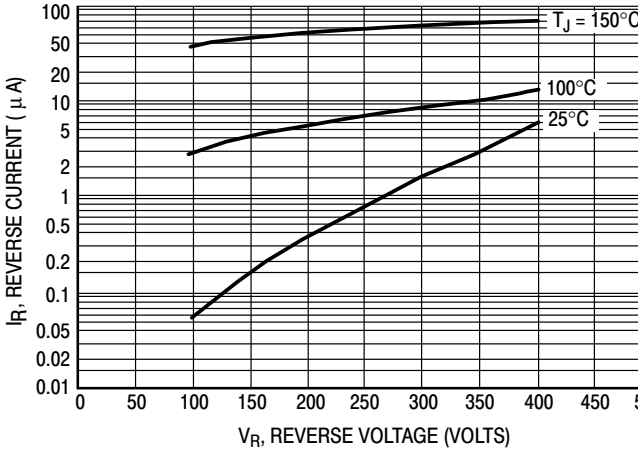


Figure 6. Typical Forward Voltage (Per Leg)



*The curves shown are typical for the highest voltage device in the voltage groupi
Typical reverse current for lower voltage selections can be estimated from these sa
curves if V_R is sufficiently below rated V_R.

Figure 7. Typical Reverse Current (Per Leg)*

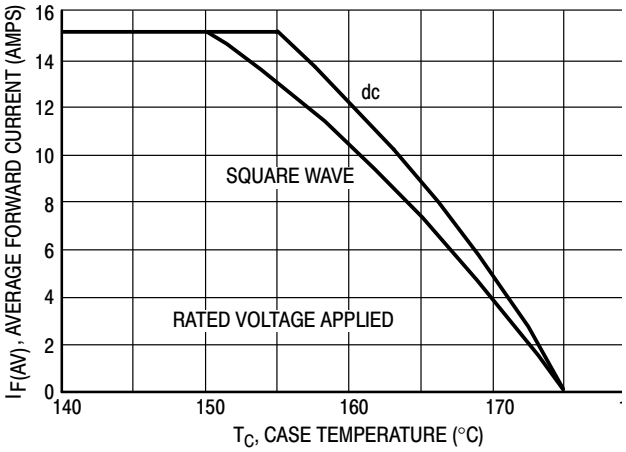


Figure 8. Current Derating, Case (Per Leg)

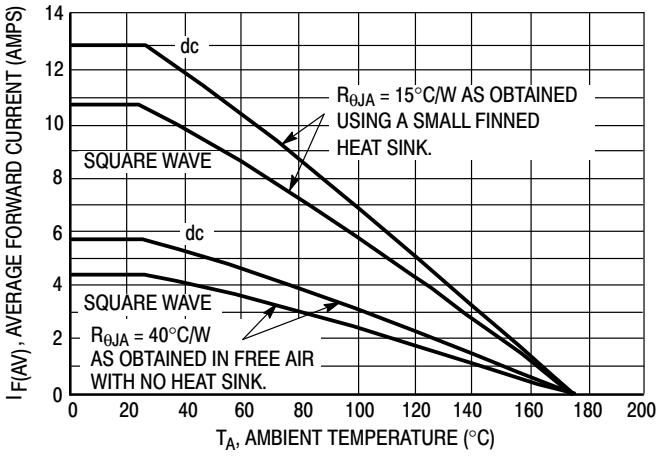


Figure 9. Current Derating, Ambient (Per Leg)

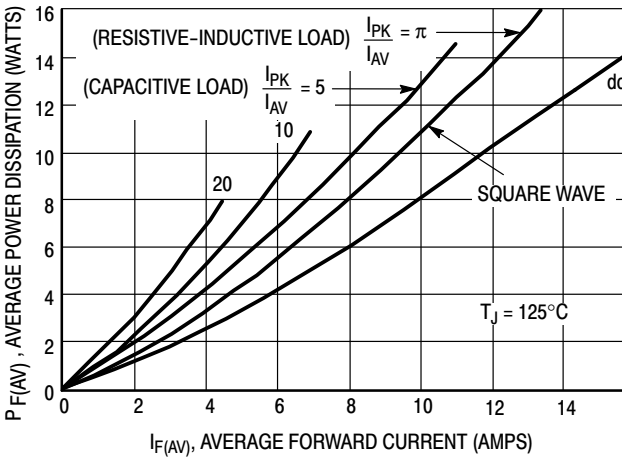


Figure 10. Power Dissipation (Per Leg)

MUR3060WT

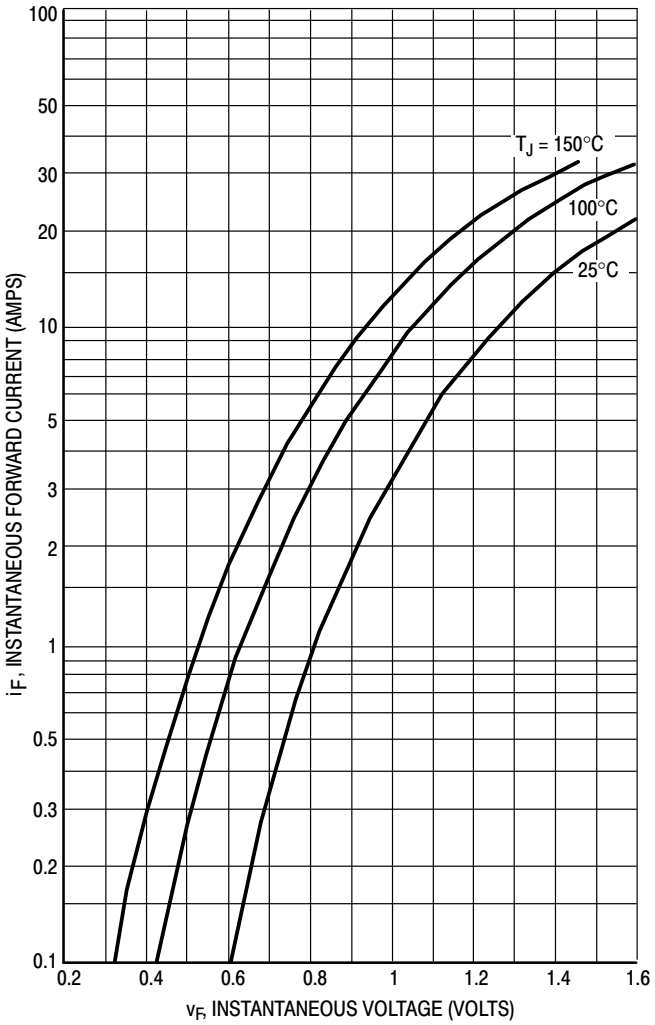
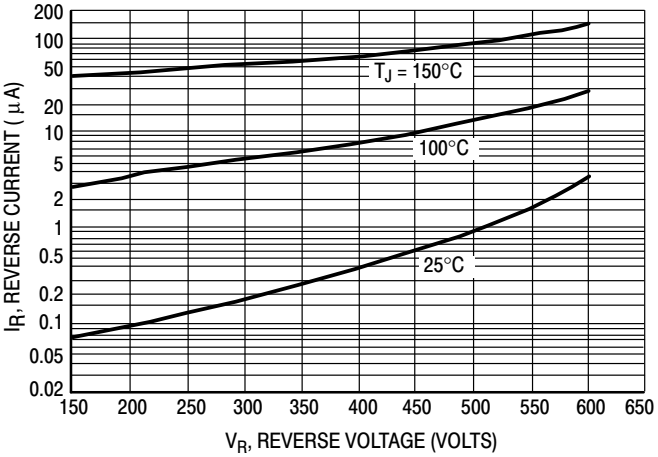


Figure 11. Typical Forward Voltage (Per Leg)



*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V_R is sufficiently below rated V_R.

Figure 12. Typical Reverse Current (Per Leg)*

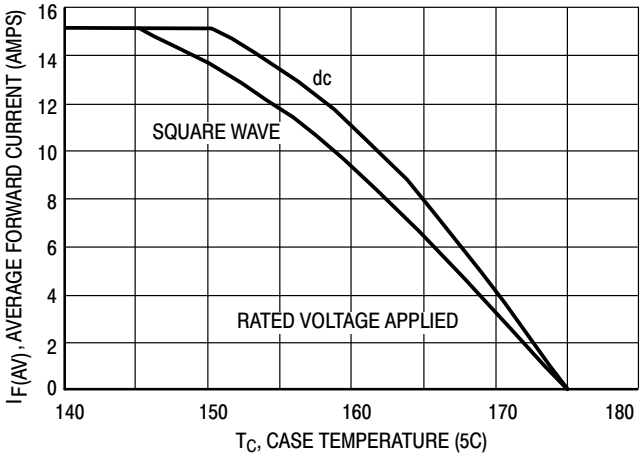


Figure 13. Current Derating, Case (Per Leg)

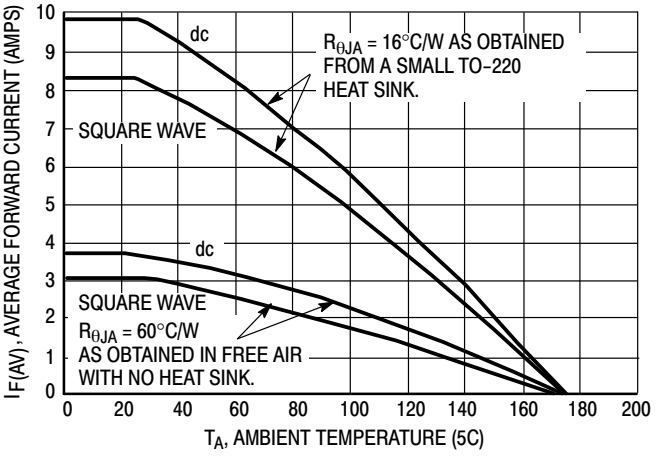


Figure 14. Current Derating, Ambient (Per Leg)

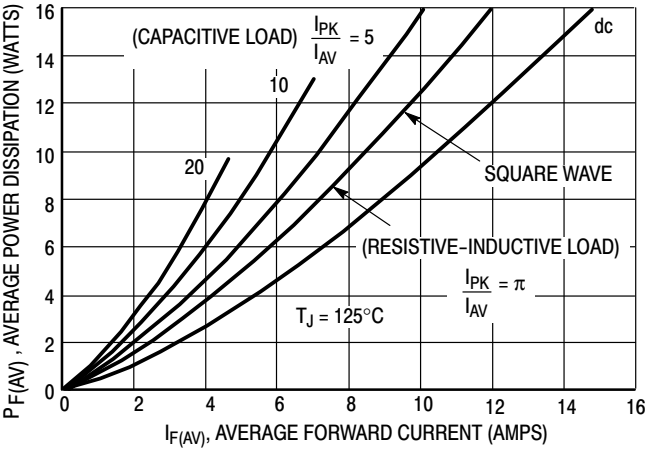


Figure 15. Power Dissipation (Per Leg)

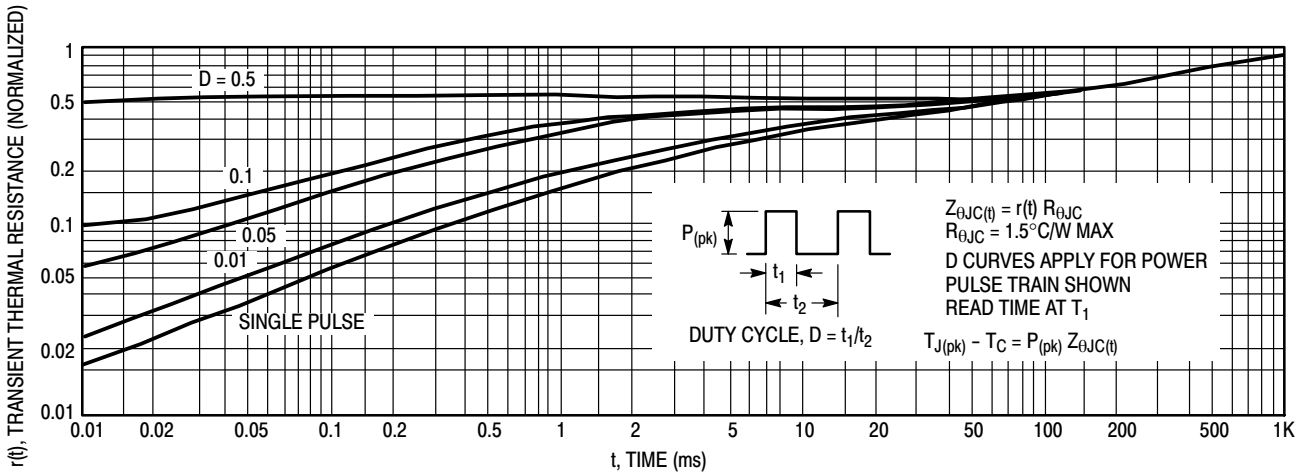


Figure 16. Thermal Response

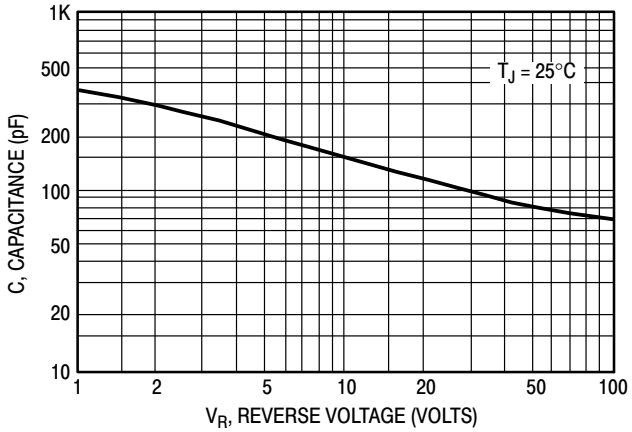
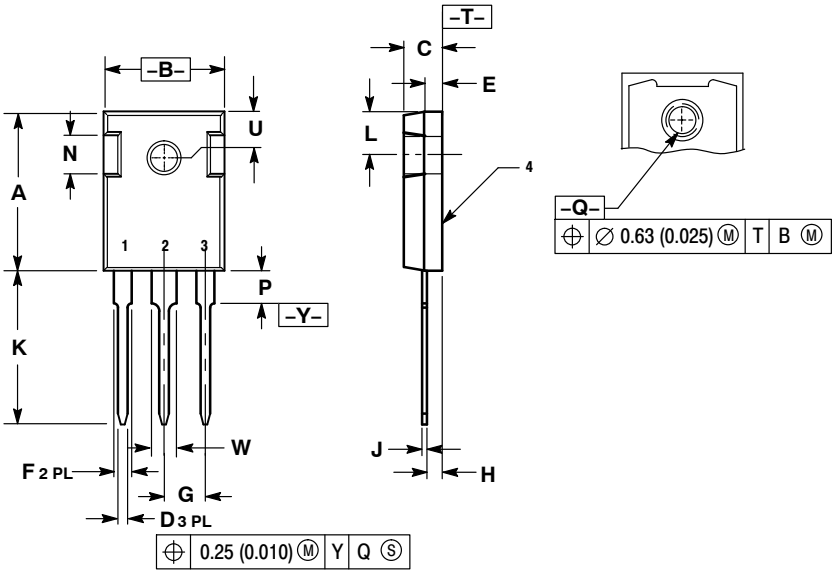


Figure 17. Typical Capacitance (Per Leg)

PACKAGE DIMENSIONS

TO−247
CASE 340L−02
ISSUE F



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	20.32	21.08	0.800	8.30
B	15.75	16.26	0.620	0.640
C	4.70	5.30	0.185	0.209
D	1.00	1.40	0.040	0.055
E	1.90	2.60	0.075	0.102
F	1.65	2.13	0.065	0.084
G	5.45 BSC		0.215 BSC	
H	1.50	2.49	0.059	0.098
J	0.40	0.80	0.016	0.031
K	19.81	20.83	0.780	0.820
L	5.40	6.20	0.212	0.244
N	4.32	5.49	0.170	0.216
P	---	4.50	---	0.177
Q	3.55	3.65	0.140	0.144
U	6.15 BSC		0.242 BSC	
W	2.87	3.12	0.113	0.123

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