

MURF1005 - MURF1060

10 Amps Super Fast Recovery



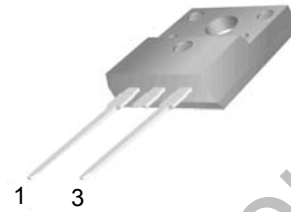
MURF1005 - MURF1060

Features:

- High surge capacity
- Low Forward Voltage Drop.
- High Current Capability.
- Super Fast Switching Speed For High Efficiency



TO-220F -2L



1. Cathode 3. Anode

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	MURF 1005	MURF 1010	MURF 1015	MURF 1020	MURF 1030	MURF 1040	MURF 1060	Unit
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{R(DC)}$	50	100	150	200	300	400	600	V
Average Rectified Forward Current Total Device, (Rated V_R), $T_j = 150^\circ\text{C}$	$I_{F(AV)}$	10							A
Nonrepetitive Peak Surge Current(Surge applied at rated load conditions half wave, single phase, 60 Hz)	I_{FSM}	130							A
Operating Junction Temperature and Storage Temperature	T_j, T_{stg}	-55 to +155							°C
Maximum Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.0				2.0			°C/W

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	MURF 1005	MURF 1010	MURF 1015	MURF 1020	MURF 1030	MURF 1040	MURF 1060	Unit
Forward Voltage ($I_F = 5\text{A}$, $T_j = 25^\circ\text{C}$) (Note 1) ($I_F = 5\text{A}$, $T_j = 150^\circ\text{C}$)	V_F	0.975 0.895			1.30 1.00		1.50 1.20		V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_j = 25^\circ\text{C}$) (Rated DC Voltage, $T_j = 150^\circ\text{C}$)	I_R	5 250			10 500				μA
Maximum Reverse Recovery Time ($I_F = 1.0\text{A}$, $di/dt = 50\text{A}/\mu\text{s}$) ($I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{REC} = 0.25\text{A}$)	T_{RR}	35 25			60 50				ns

Note 1.Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

Typical Characteristics

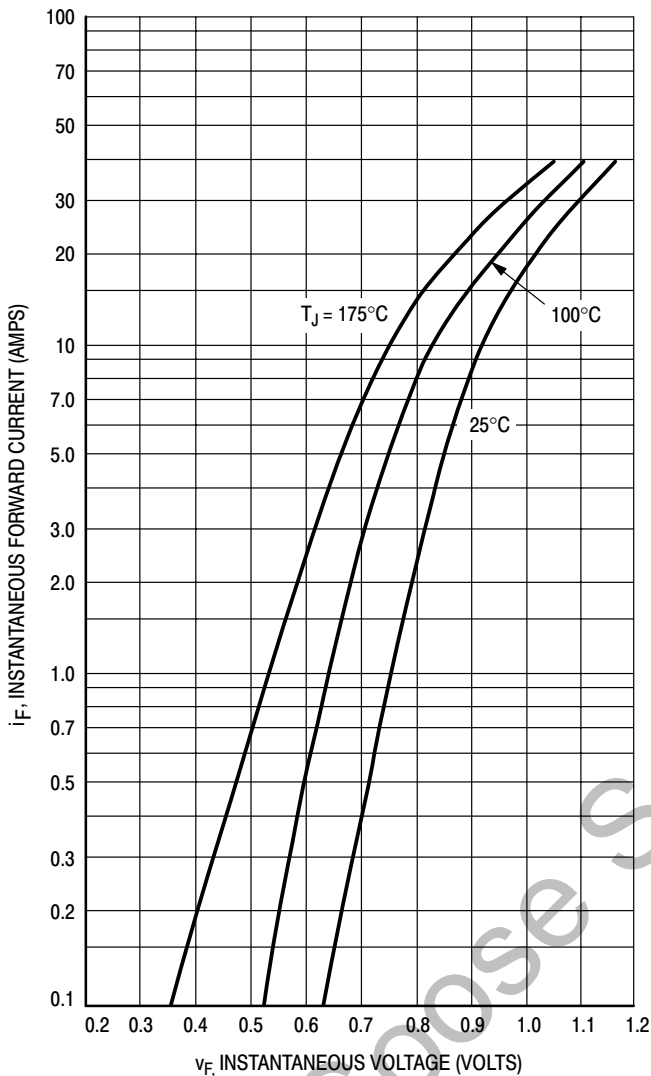


Figure 1. Typical Forward Voltage, Per Leg

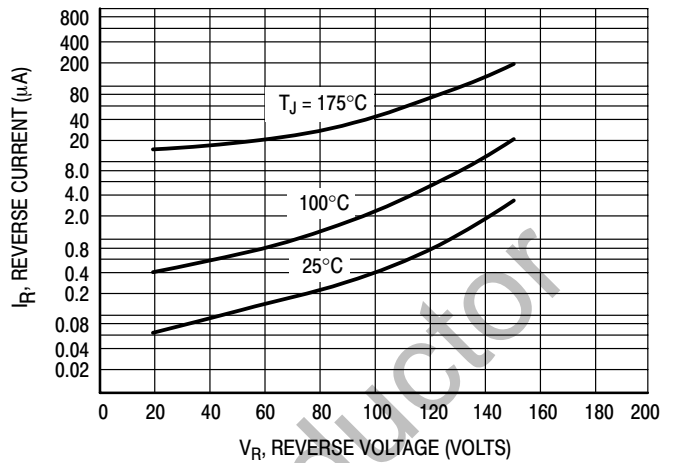


Figure 2. Typical Reverse Current, Per Leg*

* 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 .

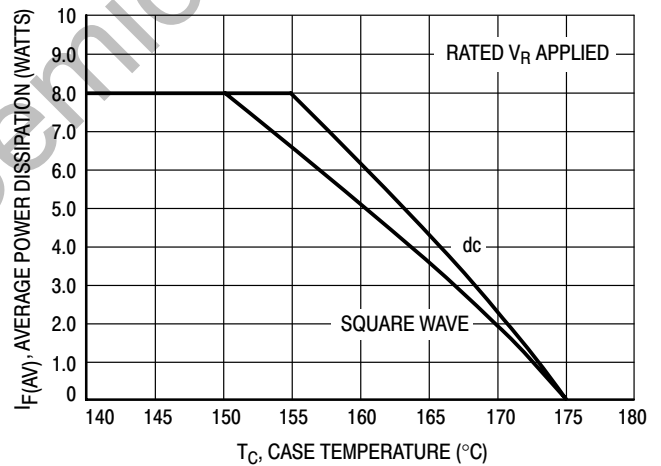


Figure 3. Current Derating, Case, Per Leg

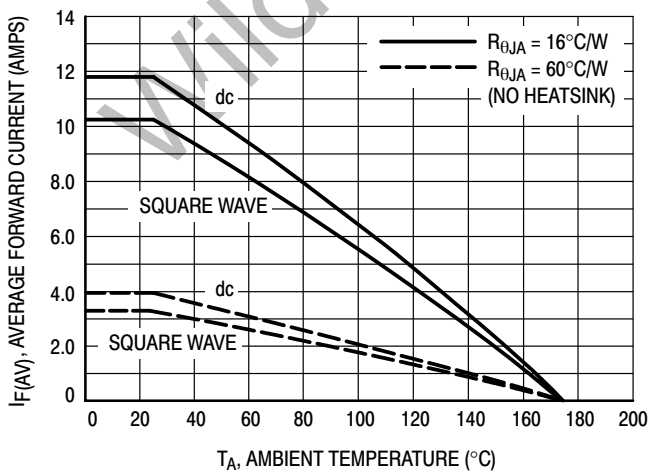


Figure 4. Current Derating, Ambient, Per Leg

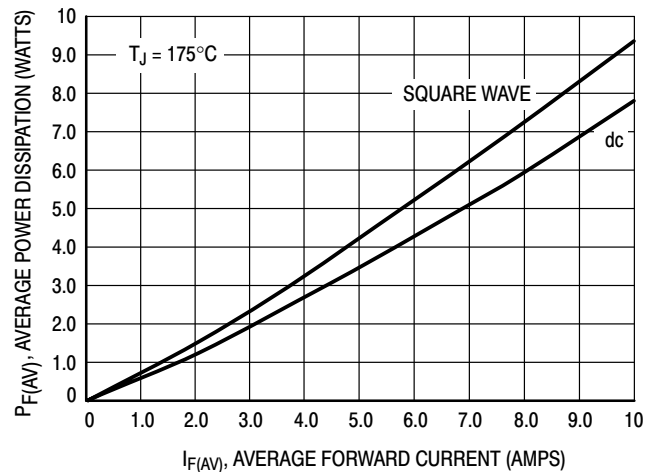


Figure 5. Power Dissipation, Per Leg

Package Dimension

TO-220F -2L

Unit: mm

