


# MURF3010CT – MURF3060CT

## 30 Amps Super Fast Recovery


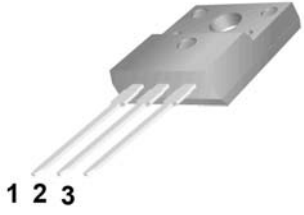
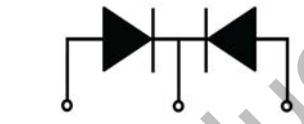


**MURF3010CT – MURF3060CT**

**Features:**

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

TO-220F

1. Anode 2. Cathode 3. Anode

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

Parameter	Symbol	MUR F3010 CT	MUR F3015 CT	MUR F3020 CT	MUR F3040 CT	MUR F3060 CT	Unit	
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	150	200	400	600	V	
Working Peak Reverse Voltage	$V_{RWM}$	100	150	200	400	600	V	
DC Blocking Voltage	$V_{R(DC)}$	100	150	200	400	600	V	
Average Rectified Forward Current Per Leg Total Device, (Rated $V_R$ ), $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	15 30						A
Peak Rectified Forward Current Per Diode Leg (Rated $V_R$ , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	$I_{FM}$	30						A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half wave, single phase, 60 Hz)	$I_{FSM}$	180						A
Operating Junction Temperature and Storage Temperature	$T_J, T_{stg}$	-65 to +175						°C
Maximum Thermal Resistance, Junction-to-Case (Per Leg)	$R_{\theta JC}$	3.0			2.0			°C/W

### ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Parameter	Symbol	MUR F3010 CT	MUR F3015 CT	MUR F3020 CT	MUR F3040 CT	MUR F3060 CT	Unit
Forward Voltage (Note 1) ( $I_F = 15\text{ A}$ , $T_C = 25^\circ\text{C}$ ) ( $I_F = 15\text{ A}$ , $T_C = 150^\circ\text{C}$ )	$V_F$	0.975 0.895			1.50 1.20	1.80 1.50	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_C = 25^\circ\text{C}$ ) (Rated DC Voltage, $T_C = 150^\circ\text{C}$ )	$I_R$	5 250			10 500		$\mu\text{A}$
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			35 30		ns

Note 1. Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

Typical Characteristics

FIG.1 - FORWARD CURRENT DERATING CURVE

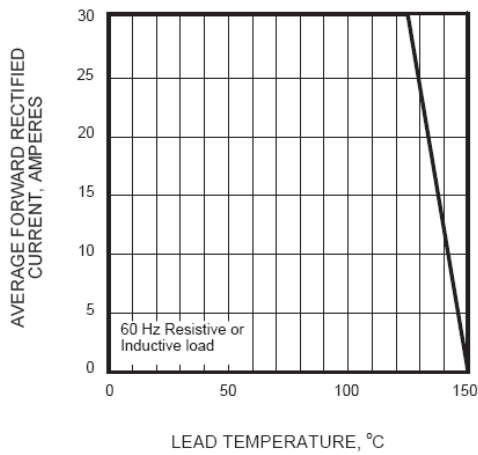


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

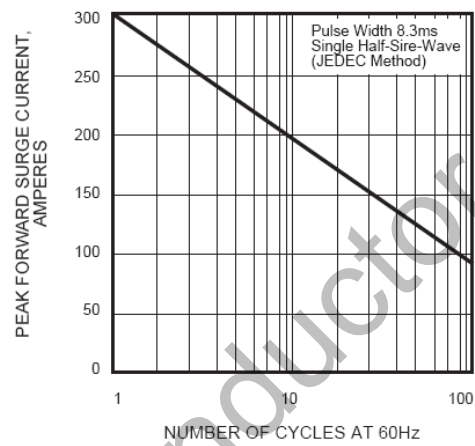


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

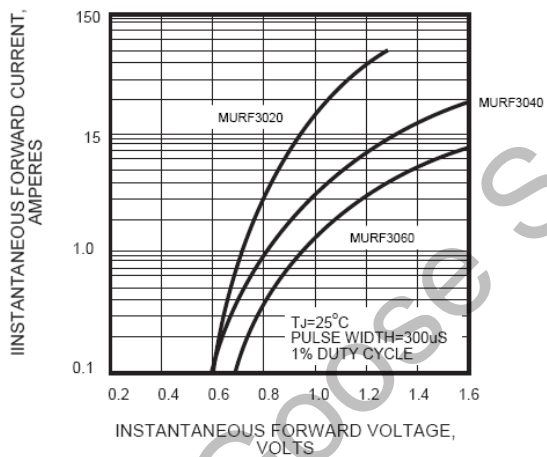


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

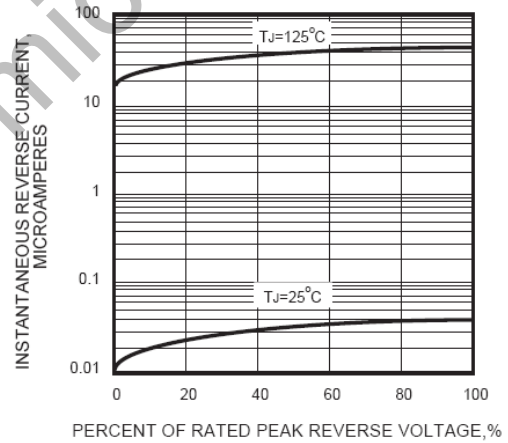
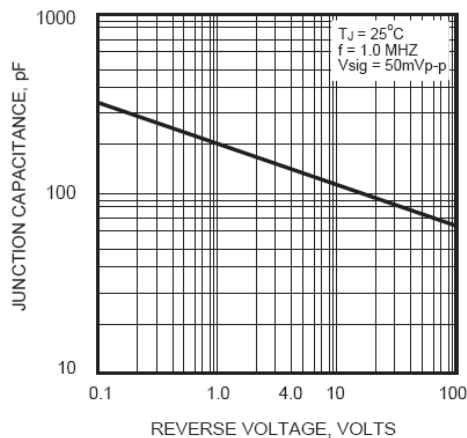


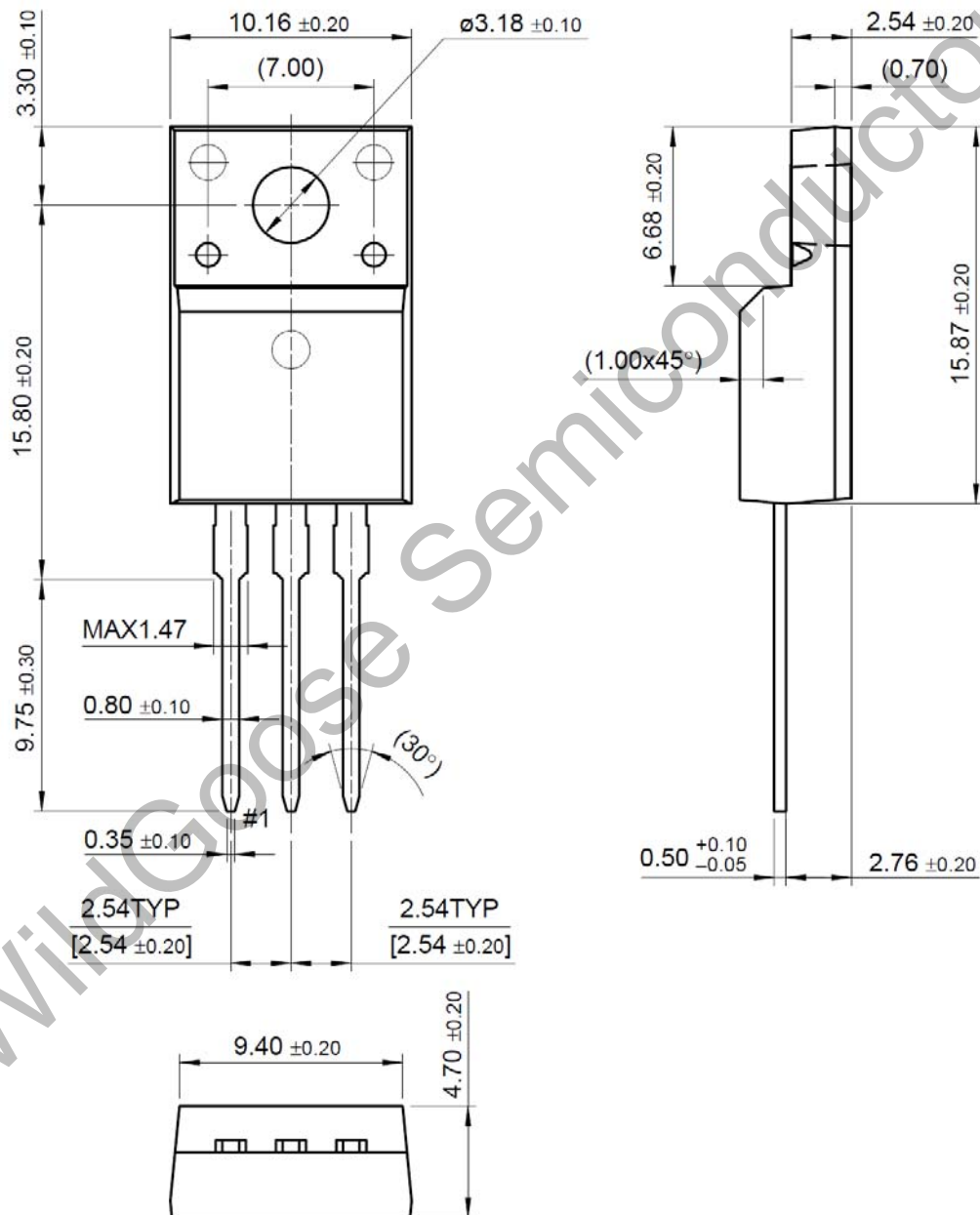
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Package Dimension

TO-220F

Unit: mm



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