

# MURF3020CT THRU MURF3060CT

## GLASS PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 200 -600 Volts Forward Current - 30.0Amperes

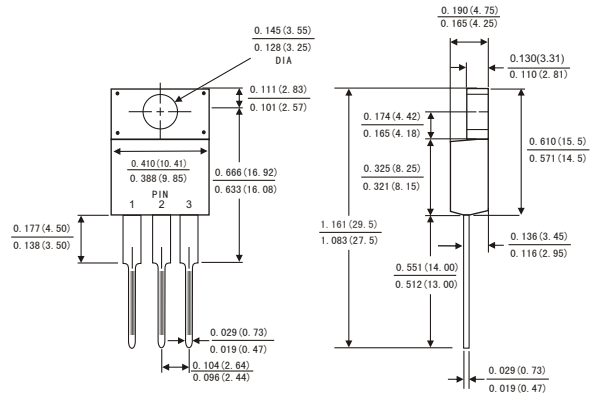


### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### ITO-220AB



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- Case: JEDEC ITO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.08ounce, 2.24 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	MURF 3020CT	MURF 3040CT	MURF 3060CT	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	Volts
Maximum RMS voltage	$V_{RMS}$	140	280	420	Volts
Maximum DC blocking voltage	$V_{DC}$	200	400	600	Volts
Maximum average forward rectified current(see Fig.1)	Per leg	15.0			Amps
	Total device	30.0			
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300.0			Amps
Maximum instantaneous forward voltage at 15.0A(Note 1)	$V_F$	0.975	1.3	1.5	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$T_a = 25^\circ\text{C}$	5	10		uA
	$T_a = 125^\circ\text{C}$	500			
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35			ns
Typical thermal resistance (Note 3)	$R_{\theta JC}$	2.5			°C/W
Operating junction temperature range	$T_J$	-65 to +150			°C
Storage temperature range	$T_{STG}$	-65 to +175			°C

Notes: 1. Pulse test: 300μs pulse width,1% duty cycle

2. Reverse recovery test conditions  $I_F=0.5A, I_R=1.0A, I_{rr}=0.5A$

3. Thermal resistance from junction to case

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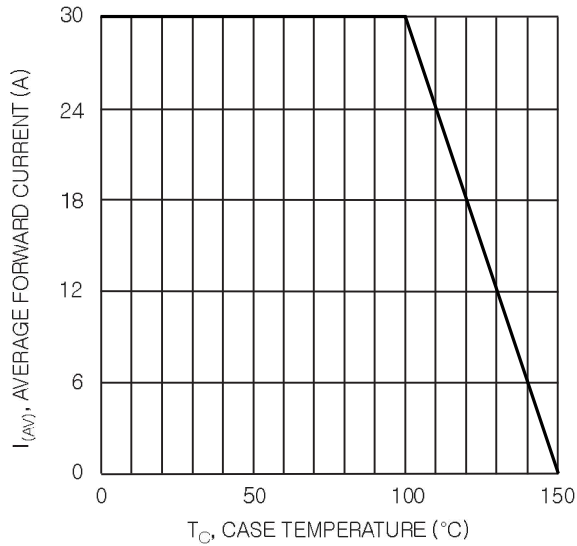


Fig. 1 Forward Current Derating Curve

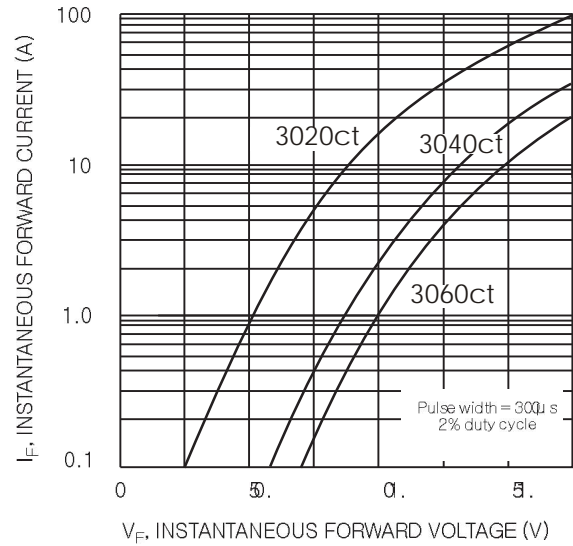


Fig. 2 Typical Forward Characteristics

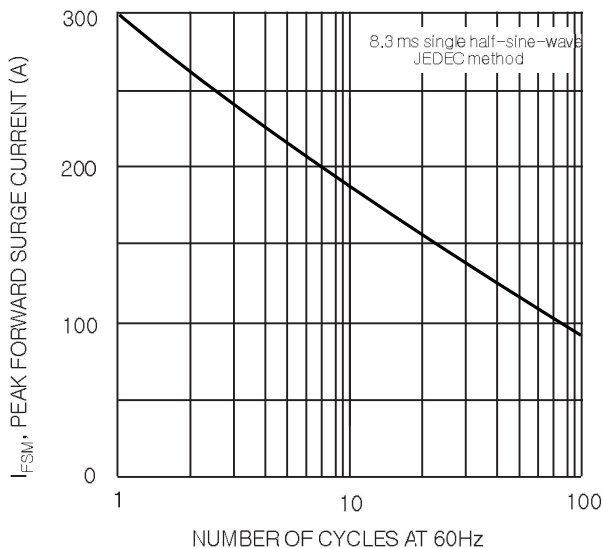


Fig. 3 Maximum Non-Repetitive Surge Current

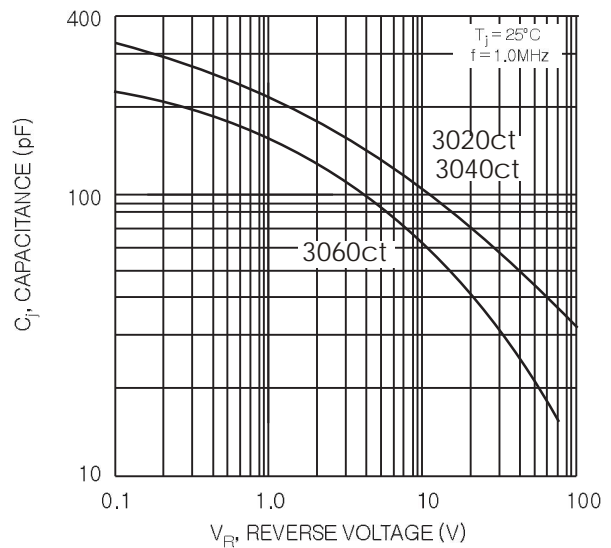
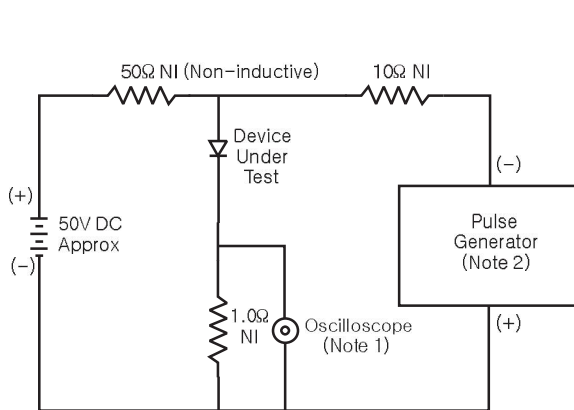


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
  2. Rise Time = 10ns max. Input Impedance = 50Ω.

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit