

MUR1250CT THRU MUR12600CT

ULTRAFAST RECOVERY RECTIFIERS

VOLTAGE 50 to 600 Volts **CURRENT** 12 Amperes

TO-220AB

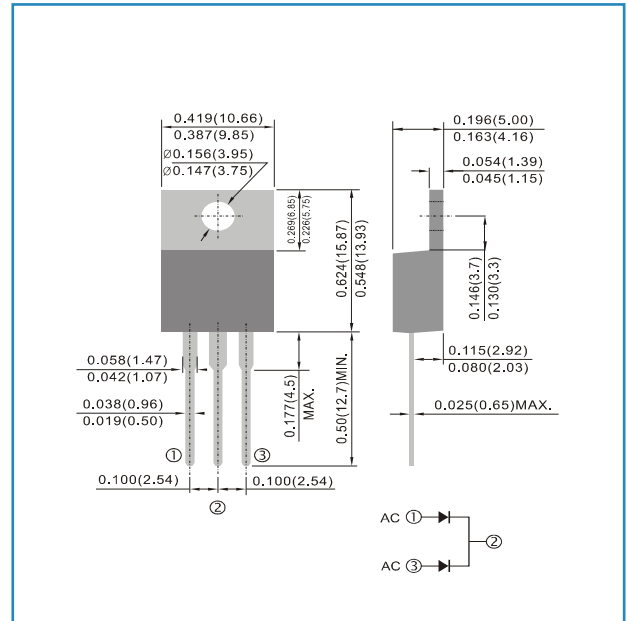
Unit : inch(mm)

Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application

Mechanical Data

- ✧ Case: TO-220AB Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .16", (4.06mm) from case.
- ✧ Weight: 2.24 grams



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MUR 1250 CT	MUR 12100 CT	MUR 12150 CT	MUR 12200 CT	MUR 12300 CT	MUR 12400 CT	MUR 12500 CT	MUR 12600 CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_C = 100^\circ C$	$I_{(AV)}$	12.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125								A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.95		1.3		1.5				V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	I_R					1.0		400		μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35			50					nS
Typical Junction Capacitance (Note 2)	C_j	80			60					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	1.5								$^\circ C/W$
Operating Temperature Range	T_J	-65 to +150								$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +150								$^\circ C$

- Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
 3. Mounted on Heatsink Size of 2" x 3" x 0.25" Al-plate.

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RATING AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

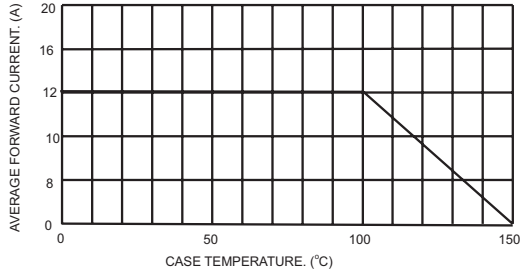


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

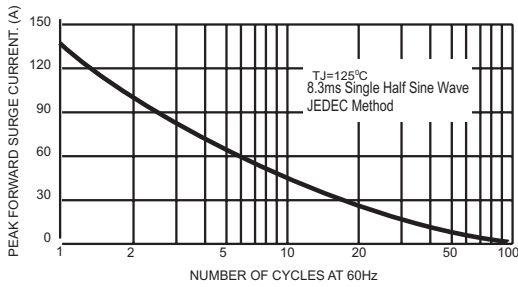


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

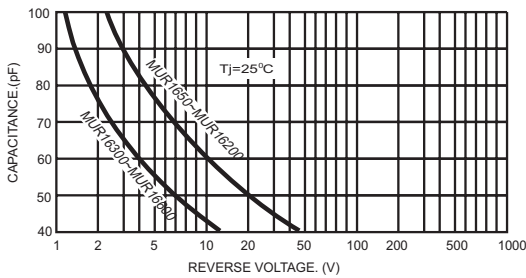


FIG.2-TYPICAL REVERSE CHARACTERISTICS

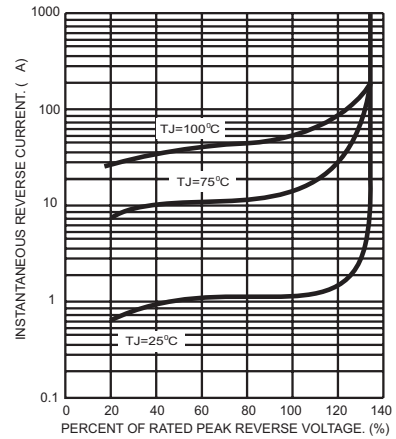


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

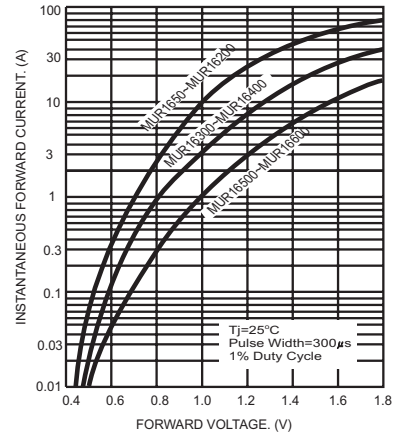


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

