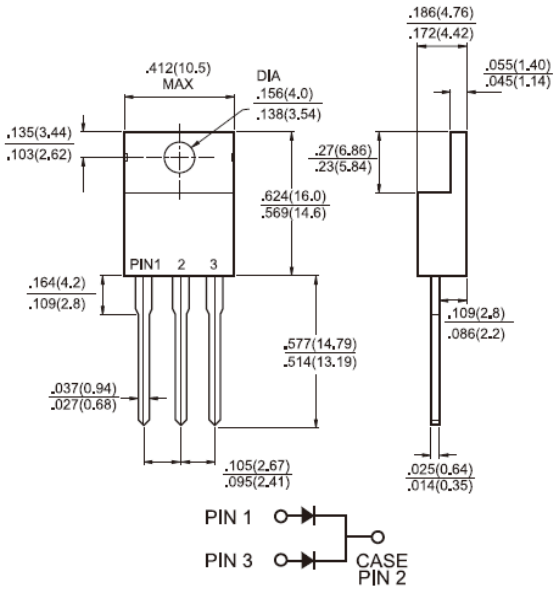
TAIWAN SEMICONDUCTOR

MUR1620CT - MUR1660CT

16.0AMPS. Switchmode Power Rectifiers

TO-220AB

RoHS COMPLIANCE



Features

- ✧ Ultrafast 35 and 60 Nanosecond Recovery times
- ✧ 175℃ operating Junction Temperature
- ✧ Popular TO-220AB Package
- ✧ Expoxy meets UL94, V0 @ 1/8"
- ✧ High temperature glass passivated junction
- ✧ High voltage capability to 600 volts
- ✧ Low leakage specified @ 150℃ case temperature
- ✧ Current derating @ both case and ambient temperatures
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Epoxy, molded
- ✧ Terminal: Pure tin plated, lead free
- ✧ Lead temperature for soldering purposes: 260℃ Max. for 10 seconds
- ✧ Finish: all external surfaces corrosion resistant and terminal leads are readily solderable
- ✧ Shipped 50 units per plastic tube
- ✧ Weight:1.9 grams

Dimensions in inches and (millimeters)

Marking Diagram

MUR16XXCT	= Specific Device Code
G	= Green Compound
Y	= Year
WW	= Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ 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 1620CT	MUR 1640CT	MUR 1660CT	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	16			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100			A
Maximum Instantaneous Forward Voltage (Note 1) @ I_F=8 A, T_A=25℃ @ I_F=8 A, T_A=150℃	V_F	0.975 0.895	1.3 1.1	1.5 1.2	V
Maximum Reverse Current @ T_A=25 ℃ @ T_A=125 ℃	I_R	5 250	10 500		uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	25	50		ns
Typical Thermal Resistance	$R_{\theta JC}$	3.0	2.0		^{O}C/W
Operating Temperature Range	T_J	-65 to + 175			^{O}C
Storage Temperature Range	T_{STG}	-65 to + 175			^{O}C

Note 1: Pulse lest: tp = 300uS, Duty Cycle<1%

Note 2: Reverse Recovery Test Condition:IF=0.5A, IR=1.0A, IRR=0.25A

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RATINGS AND CHARACTERISTIC CURVES (MUR1620CT THRU MUR1660CT)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

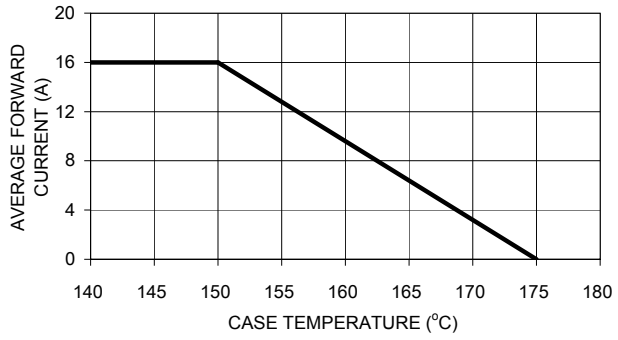


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

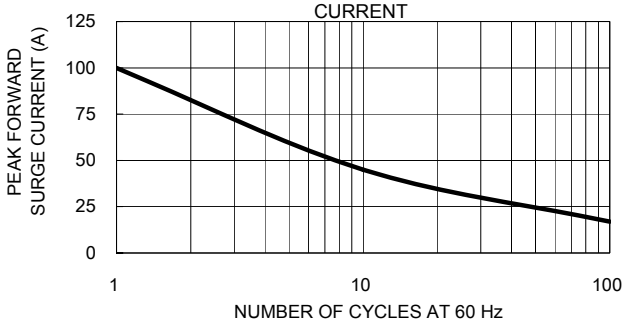


FIG. 5 TYPICAL JUNCTION CAPACITANCE

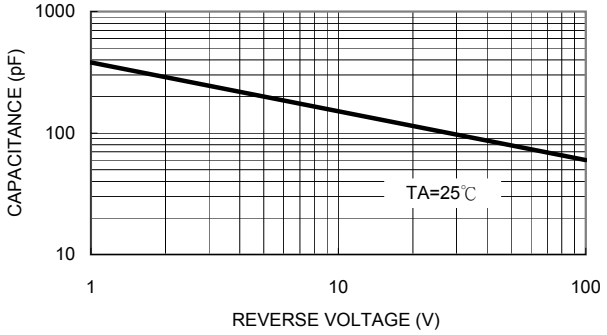


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

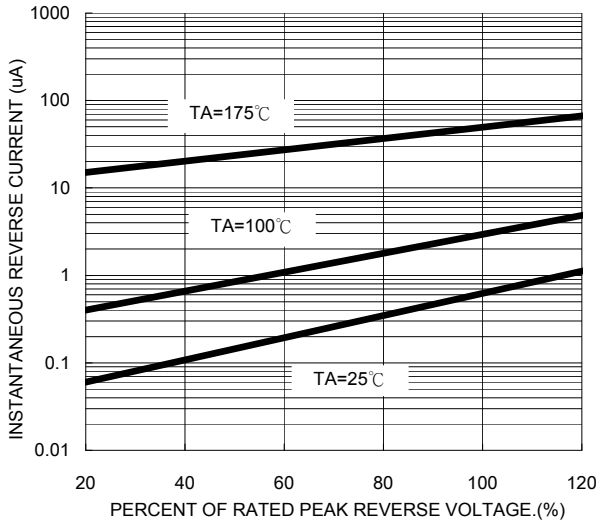


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

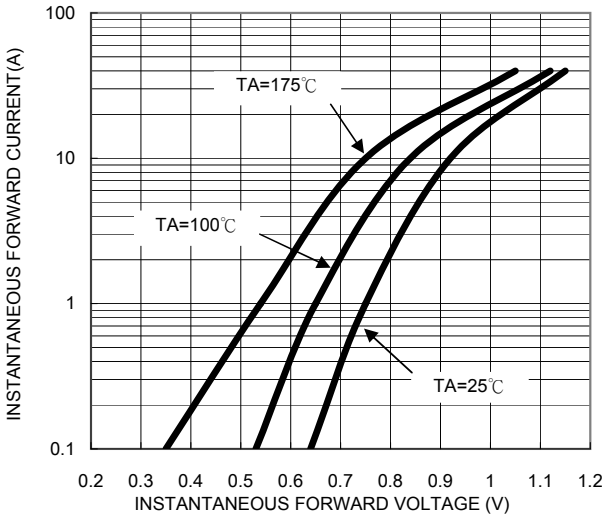
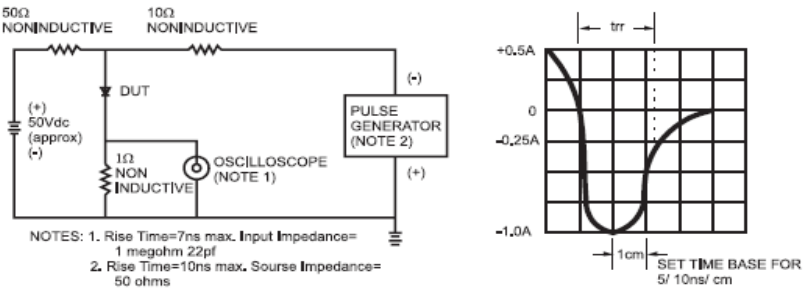


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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