



RoHS
COMPLIANCE

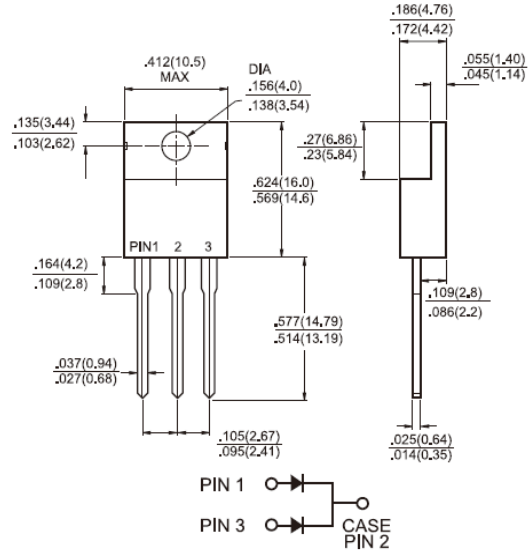


MUR1620CT - MUR1660CT

16.0AMPS. Switchmode Power Rectifiers
TO-220AB

Features

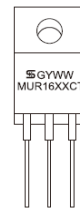
- ✧ Ultrafast 35 and 60 Nanosecond Recovery times
- ✧ 175°C operating Junction Temperature
- ✧ Popular TO-220AB Package
- ✧ Epoxy meets UL94, V0 @ 1/8"
- ✧ High temperature glass passivated junction
- ✧ High voltage capability to 600 volts
- ✧ Low leakage specified @ 150°C case temperature
- ✧ Current 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°C 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 °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 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, $T_A=25^\circ\text{C}$ @ $I_F=8$ A, $T_A=150^\circ\text{C}$ | V_F | 0.975 0.895 | 1.3 1.1 | 1.5 1.2 | V |
| Maximum Reverse Current @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$ | I_R | 5 250 | 10 500 | | μA |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 25 | 50 | | ns |
| Typical Thermal Resistance | $R_{\theta JC}$ | 3.0 | 2.0 | | $^\circ\text{C/W}$ |
| Operating Temperature Range | T_J | -65 to + 175 | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to + 175 | | | $^\circ\text{C}$ |

Note 1: Pulse lest: $t_p = 300\mu\text{s}$, Duty Cycle<1%

Note 2: Reverse Recovery Test Condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $IRR=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES (MUR1620CT THRU MUR1660CT)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

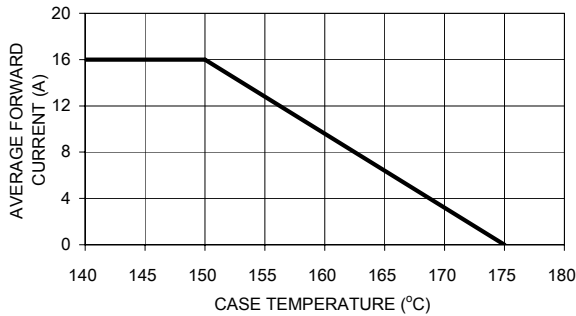


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

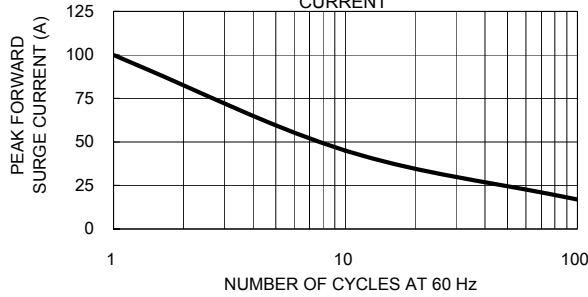


FIG. 5 TYPICAL JUNCTION CAPACITANCE

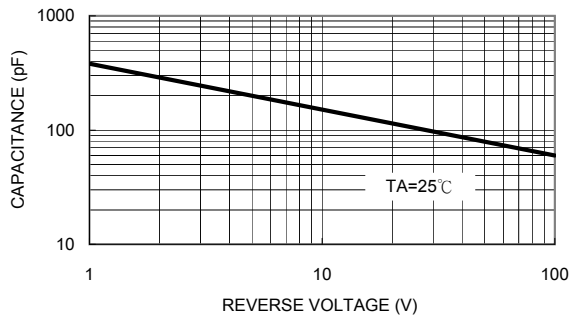


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

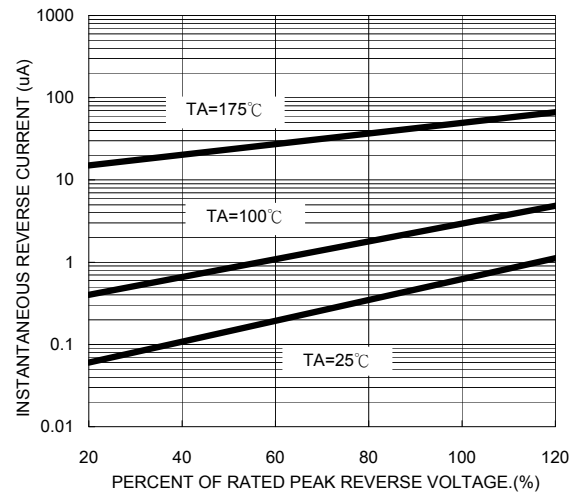


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

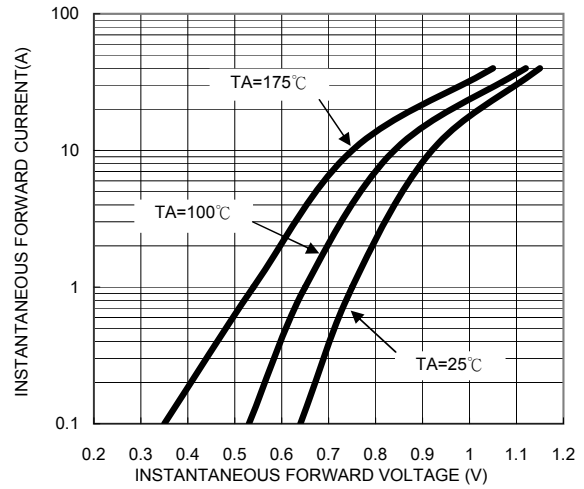
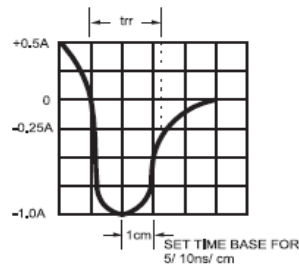
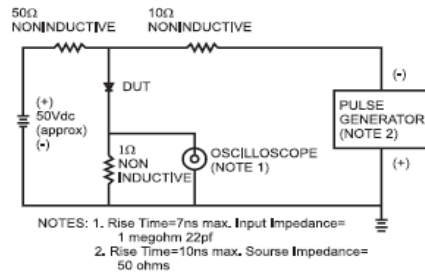


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



Version:E11