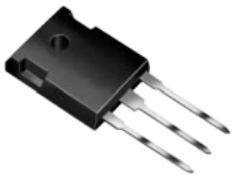
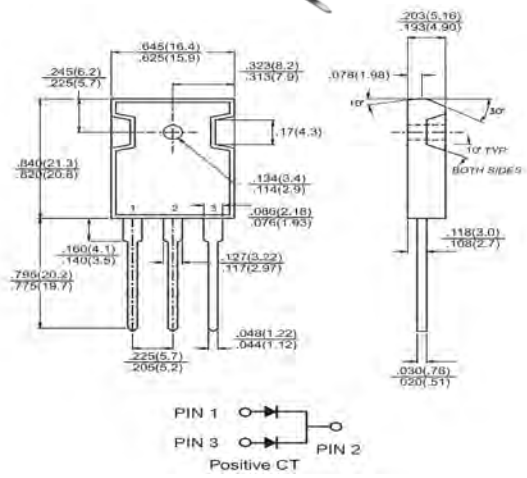
# MUR2010PT ~ MUR2060PT

**20.0 AMPS. Super Fast Rectifiers**
**Reverse Voltage: 100 to 600 Volts**
**Forward Current:30.0 Amperes**

TO-247-3L






Dimensions in inches and (millimeters)

## Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Dual rectifier construction, positive center-tap
- Glass passivated chip junctions
- Low power loss, high efficiency
- Superfast recovery time, high voltage
- Low forward voltage, high current capability
- Low thermal resistance
- High temperature soldering guaranteed: 260°C/10 seconds, 0.16" (4.06mm) lead lengths at 5 lbs (2.3kg) tesion

## Mechanical Data

- Case: JEDEC TO-247AB molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.2 ounce, 5.6 grams

## Maximum Ratings and Electrical Characteristics

( Ratings at 25°C ambient temperature unless otherwise specified. )

| Parameter | Symbol | MUR 2010PT | MUR 2015PT | MUR 2020PT | MUR 2030PT | MUR 2040PT | MUR 2060PT | Units |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking voltage | $V_{DC}$ | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current at Tc=100℃ | $I_{(AV)}$ | 20 | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method ) | $I_{FSM}$ | 200 | | | | | | A |
| Maximum Instantaneous Forward Voltage @10.0A | $V_F$ | 0.95 | | | 1.30 | | 1.70 | V |
| Maximum D.C. Reverse Current @ Tc=25℃<br>at Rated DC Blocking Voltage @ Tc=100℃ | $I_R$ | 10.0<br>500 | | | | | | uA<br>uA |
| Maximum Reverse Recovery Time(Note 2) $T_J$=25℃ | trr | 35 | | | | | | nS |
| Typical Junction Capacitance (Note 1) | $C_j$ | 175.0 | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JC}$ | 2.5 | | | | | | ℃/W |
| Operating Junction Temperature Range | $T_J$ | -55 to +150 | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | ℃ |

**Notes:** 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
2. Reverse Recovery Test Conditions: $I_F$=0.5A, $I_R$=1.0A, Recover to 0.25A.
3. Mounted on 4" x 6" x 0.25" Al-Plate.

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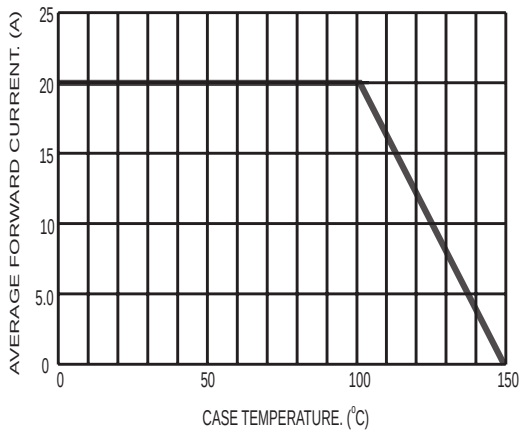
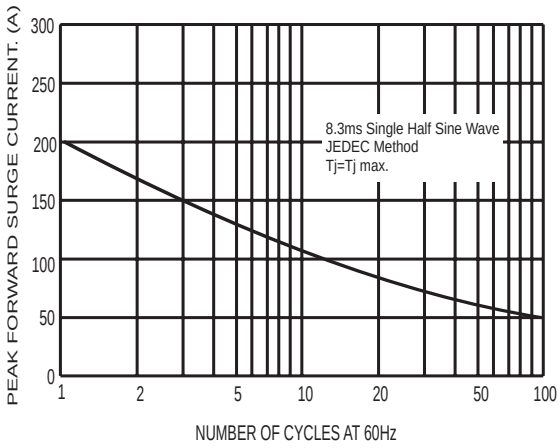
## RATINGS AND CHARACTERISTIC CURVES

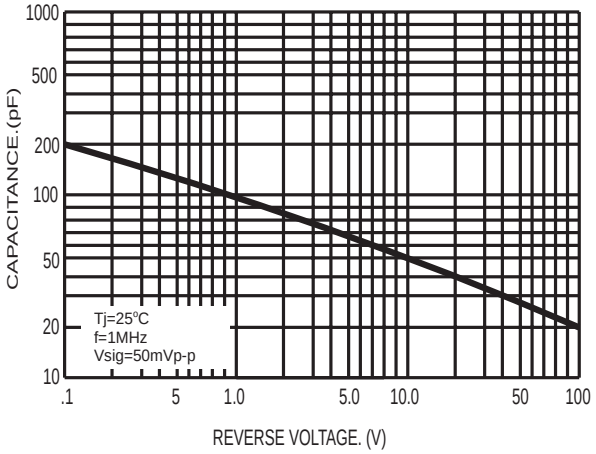
### FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE



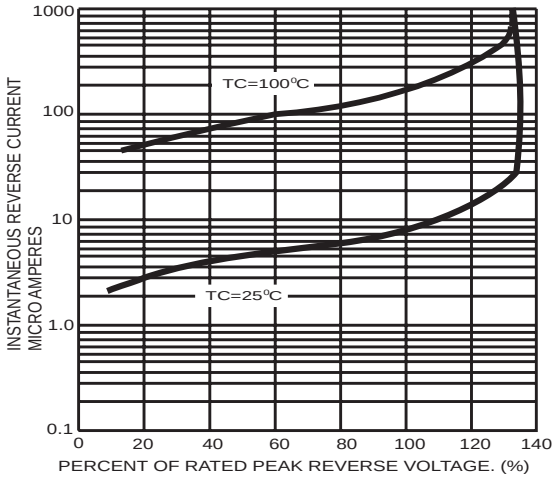

### FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG



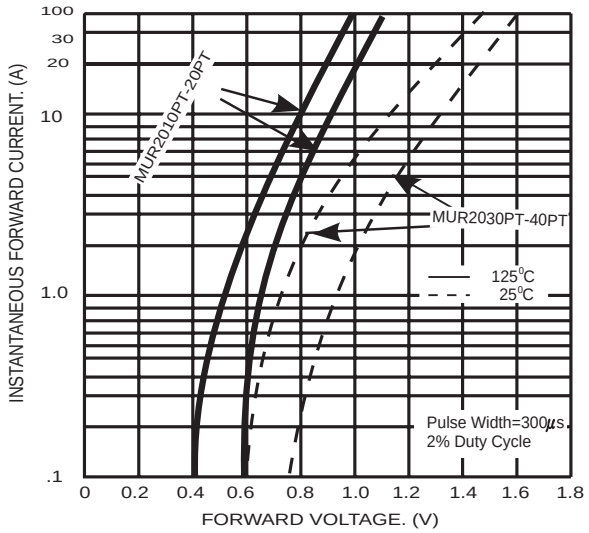

### FIG.3- TYPICAL JUNCTION CAPACITANCE PER LEG



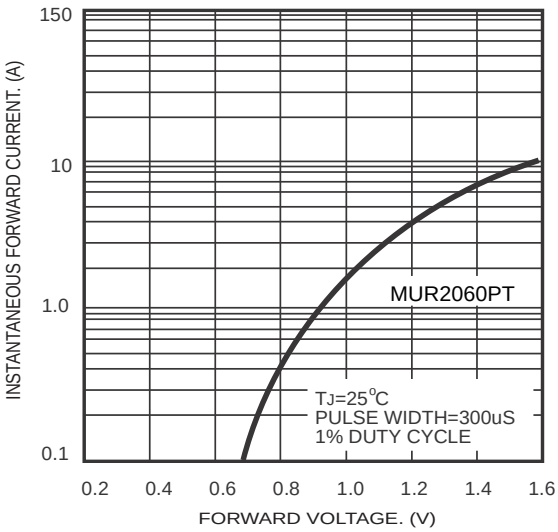

### FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG




### FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

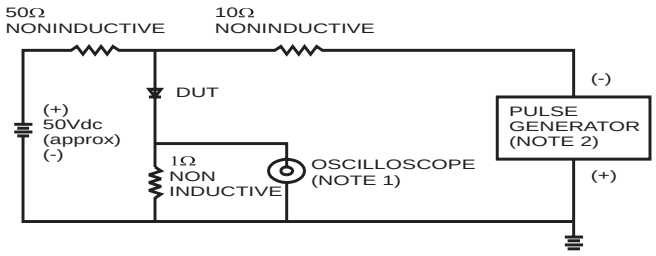



### FIG.5.1- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

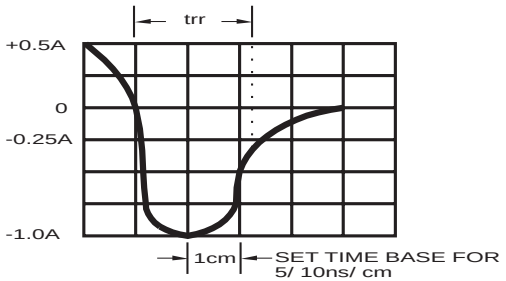


## RATINGS AND CHARACTERISTIC CURVES(Continued)

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




NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms




| Packge | Packing | Box Size L×W×H(mm) | Quatity(pcs/box) | Carton Size L×W×H(mm) | Quatity(pcs/carton) |
|---|---|---|---|---|---|
| TO-247 | 30pcs/Tube | 570×155×50 | 450 | 580×340×125 | 1800 |