

### VOLTAGE RANGE

100 to 600 Volts

### CURRENT

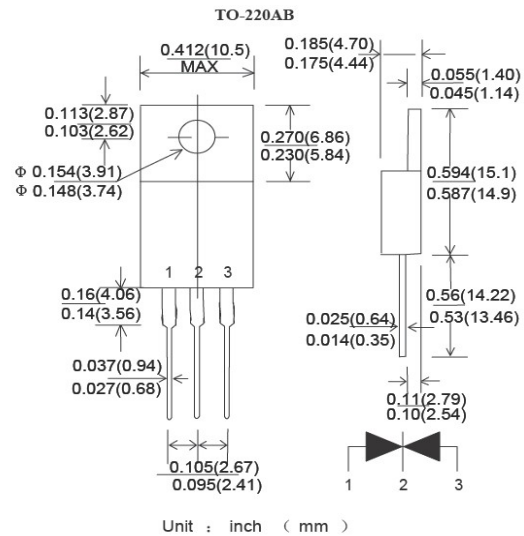
30.0 Ampere

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* Low Power Loss, High Efficiency
- \* Ultrafast 35 and 60 Nanosecond Recovery times

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.98 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 | MSR 3010CT | MSR 3020CT | MSR 3040CT | MSR 3060CT | Unit |
|----------------------------------------------------------------------------------------------------|--------|------------|------------|------------|------------|------|
| Maximum Repetitive Peak Reverse Voltage                                                            | VRRM   | 100        | 200        | 400        | 600        | V    |
| Maximum RMS Voltage                                                                                | VRMS   | 70         | 140        | 280        | 420        | V    |
| Maximum DC Blocking Voltage                                                                        | VDC    | 100        | 200        | 400        | 600        | V    |
| Maximum Average Forward Rectified Current                                                          | IF     | 30         |            |            |            | A    |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | IFSM   | 150        |            |            |            | A    |
| Maximum Instantaneous Forward Voltage @10A                                                         | VF     | 1.0        | 1.3        | 1.7        |            | V    |
| Maximum Reverse Current @ Rated VR TA=25 °C<br>TA=125 °C                                           | IR     | 10<br>500  |            |            |            | uA   |
| Typical Junction Capacitance (Note 1)                                                              | Cj     | 150        |            |            |            | pF   |
| Typical Thermal Resistance(Note 2)                                                                 | RθJA   | 30         |            |            |            | °C/w |
| Operating and Storage Temperature Range                                                            | TJ     | -65~+150   |            |            |            | °C   |
| Maximum reverse recovery time (Note 3)                                                             | Trr    | 35         |            |            |            | nS   |

NOTE1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

NOTE2. Leads maintained at ambient temperature at a distance of 9.5mm from the case

NOTE3. Measured with IF = 0.5A, IR = 1.0A, IRR = 0.25A. See figure 5.

### RATINGS AND CHARACTERISTIC CURVES (MUR3010CT THRU MUR3060CT)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

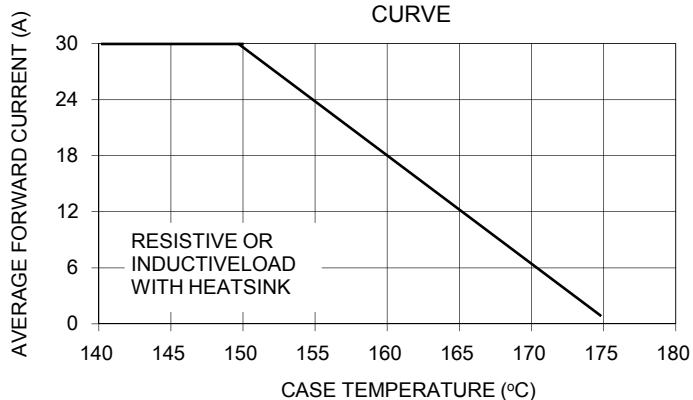


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

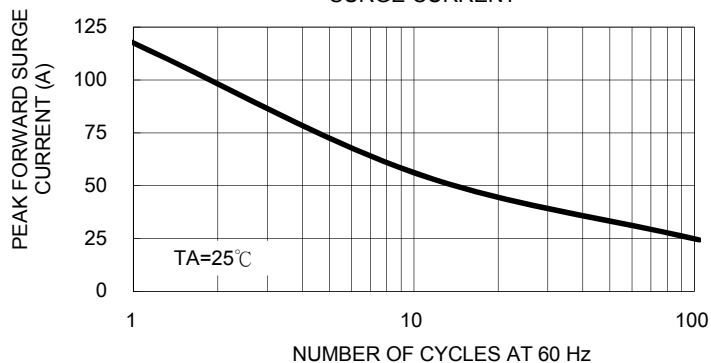


FIG. 5 TYPICAL JUNCTION CAPACITANCE

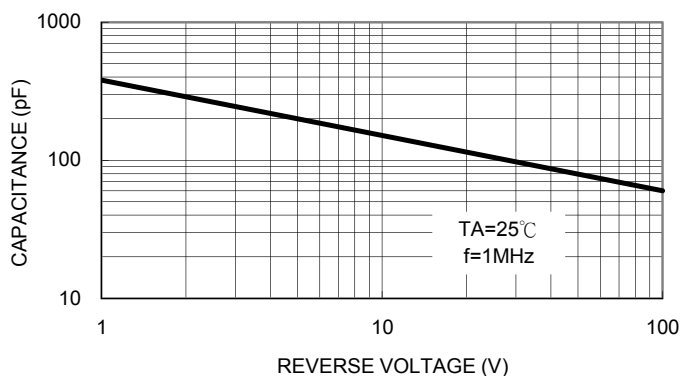


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

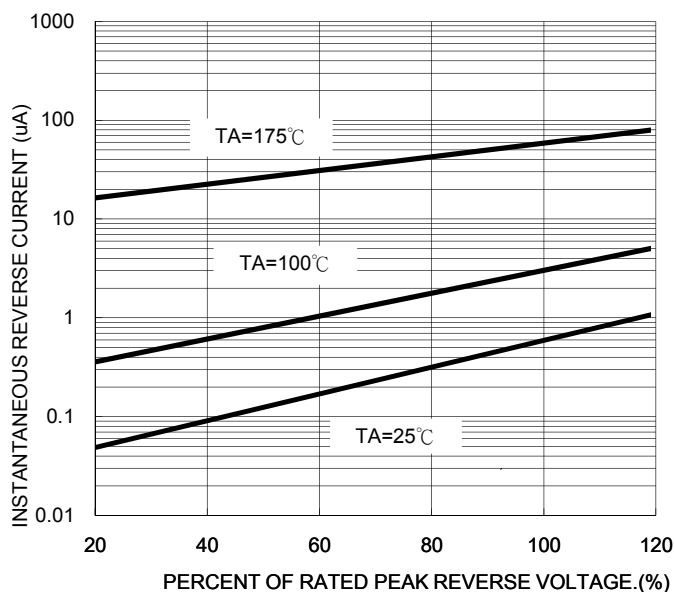
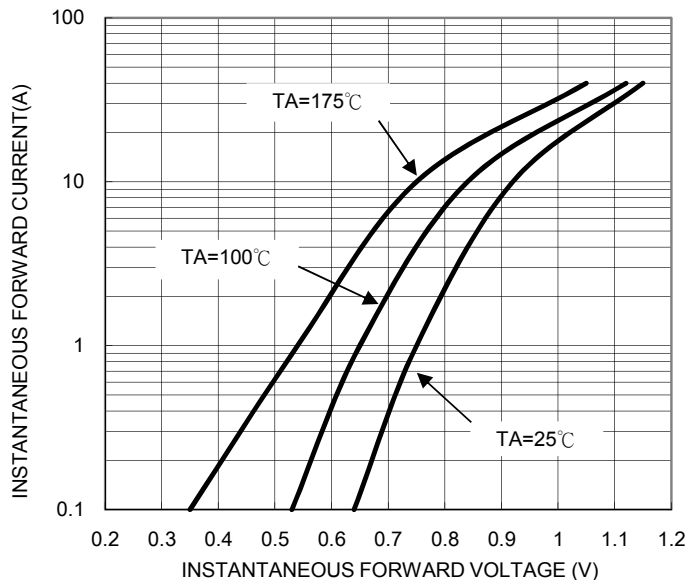


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



| Packge | Packing    | Box Size<br>L×W×H(mm) | Quatity(pcs/box) | Carton Size<br>L×W×H(mm) | Quatity(pcs/carton) |
|--------|------------|-----------------------|------------------|--------------------------|---------------------|
| TO-220 | 50pcs/Tube | 558×148×38            | 1000             | 565×225×175              | 5000                |