

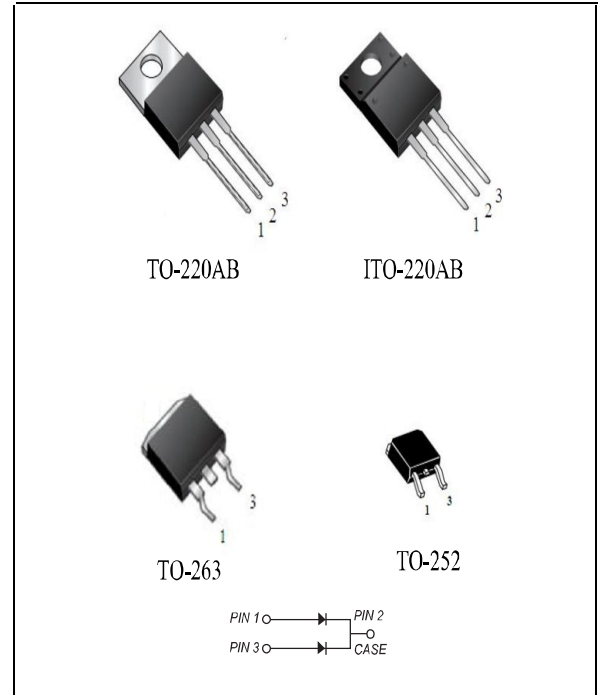
MBR1620(F)CT~MBR16200(F)CT 16.0Amp Schottky Barrier Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C,MAX. for 10 seconds

Mechanical Data

Case: (I)TO-220AB,TO-263,TO-252 molded plastic body
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| | SYMBOLS | MBR 1620(F)CT | MBR 1640(F)CT | MBR 1645(F)CT | MBR 1660(F)CT | MBR 16100(F)CT | MBR 16150(F)CT | MBR 16200(F)CT | UNITS |
|---|-----------------|---------------|---------------|---------------|---------------|----------------|----------------|------------------|---------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 40 | 45 | 60 | 100 | 150 | 200 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 32 | 42 | 70 | 105 | 140 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 20 | 40 | 45 | 60 | 100 | 150 | 200 | VOLTS |
| Maximum average forward rectified current (see fig.1) | $I_{(AV)}$ | 16.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 7.5A | V_F | 0.55 | 0.60 | 0.70 | 0.85 | 0.95 | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 0.15 | | | | 0.1 | | mA | |
| | | 40.0 | | | | 20.0 | | | |
| Typical junction capacitance (NOTE 1) | C_J | 550 | | | | 150 | | pF | |
| Typical thermal resistance (NOTE 2) | $R_{\theta JC}$ | 32 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | | -55 to +150 | | $^\circ\text{C}$ | |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to case

Ratings And Characteristic Curves

MBR1620(F)CT~MBR16200(F)CT

FIG. 1- FORWARD CURRENT DERATING CURVE

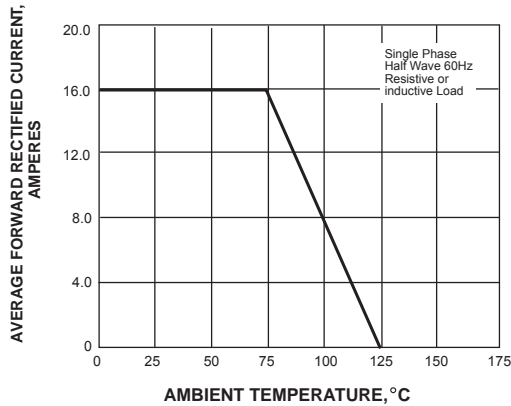


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

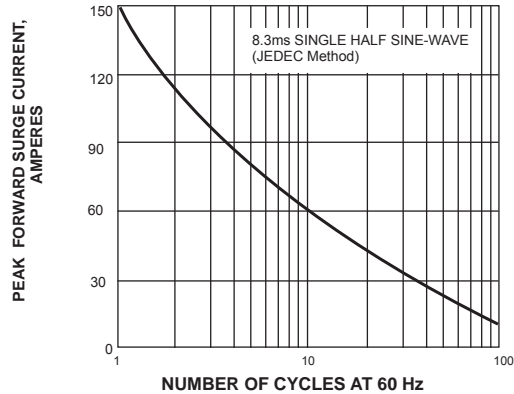


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

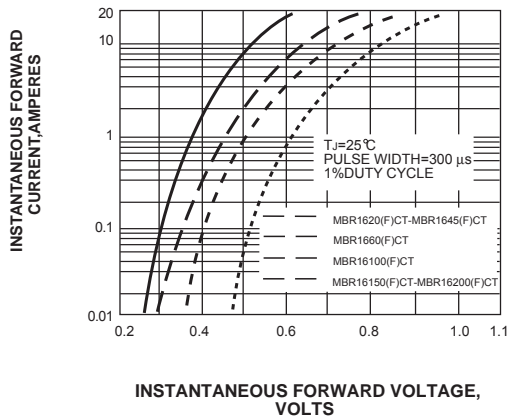


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

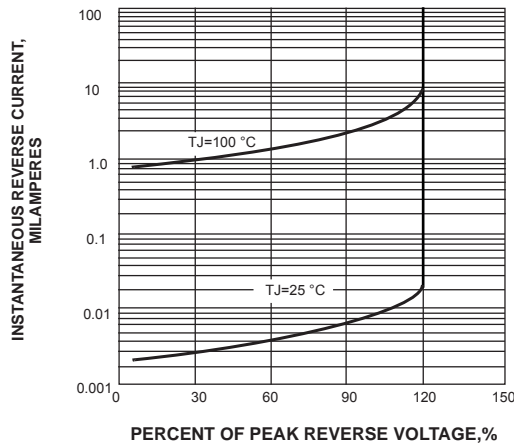


FIG. 5-TYPICAL JUNCTION CAPACITANCE

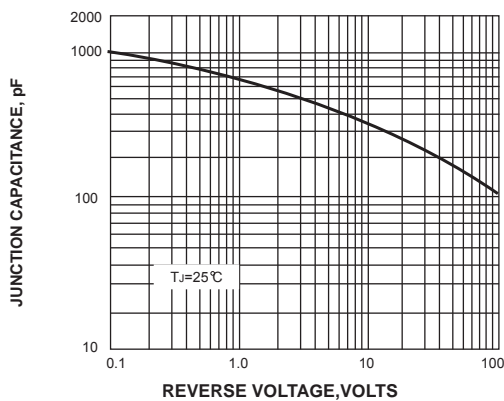
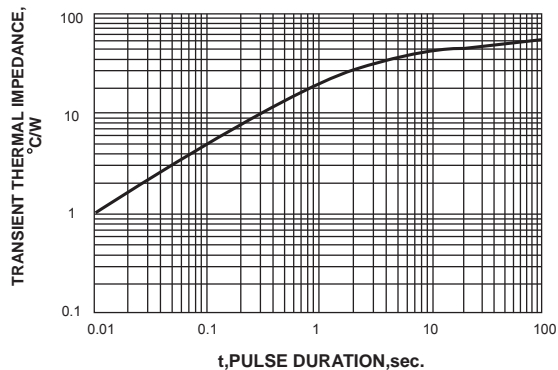
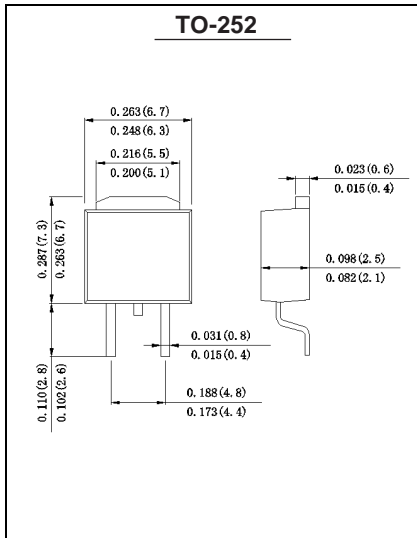
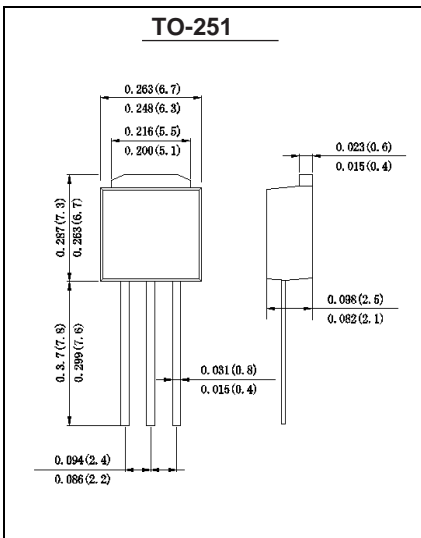
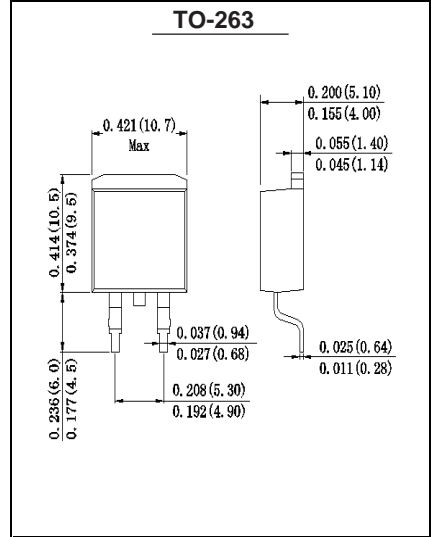
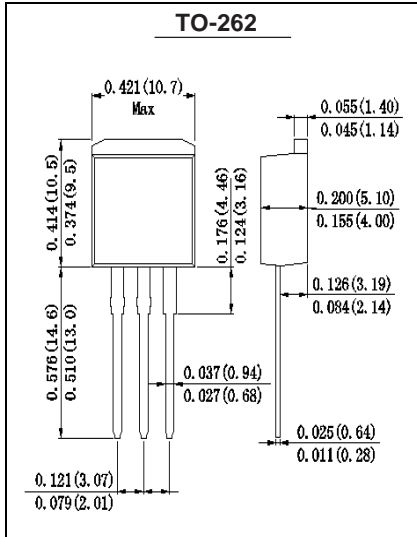
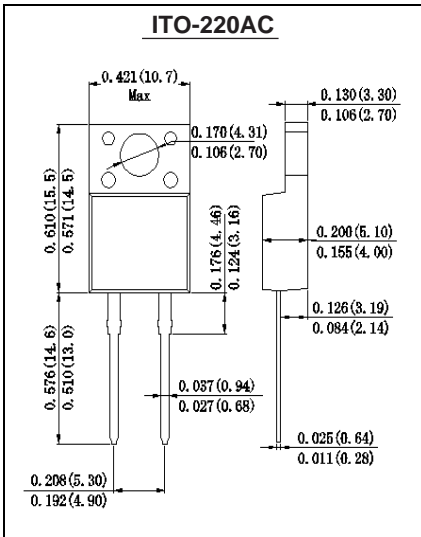
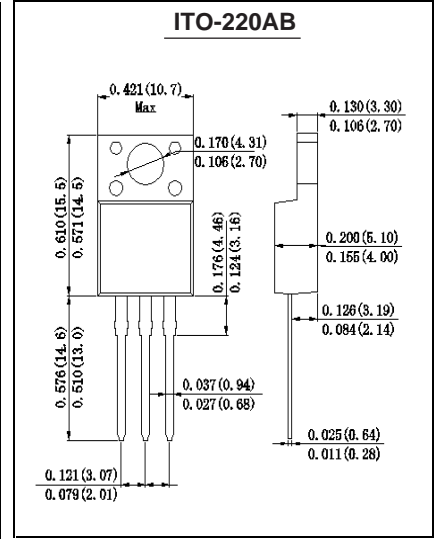
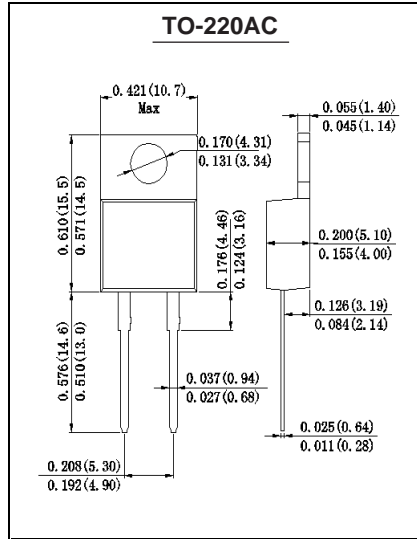
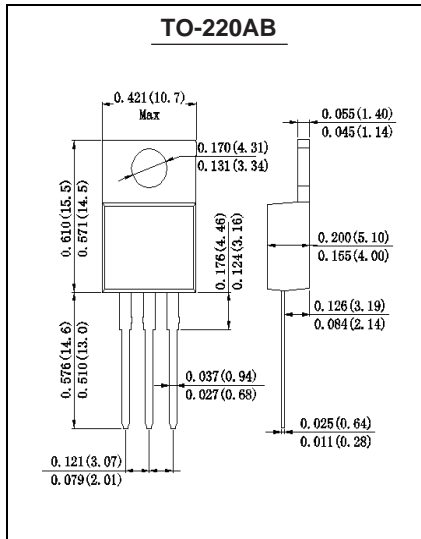


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Outline Drawing



Note: All dimensions in inches and (millimeters)