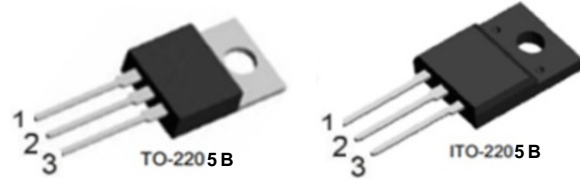




Reverse Voltage: 60Volts
 Forward Current:10.0Amperes

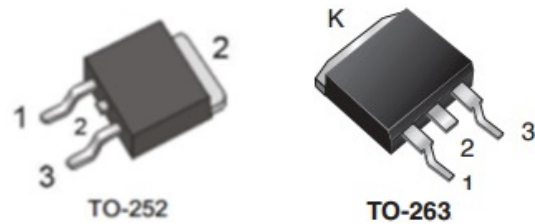
Features

- ◇ Negligible switching lossess
- ◇ Low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ High Junction temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.



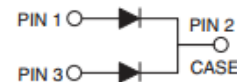
Applications

- ◇ Switching diode
- ◇ Switching mode power supply(SMPS)
- ◇ DC/DC converter
- ◇ LED lighting
- ◇ Adapter for notebook and game station



Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;
Molding compound meet UL Flammability ClassificationRating 94V-0
- ◇ Case:JEDEC TO-220AB,ITO-220AB, TO-252,TO-263



Maximum Rating

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER | SYMBOL | VALUE | UNITS |
|--------------------------------------------------|-------------|-----------------|------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 60 | V |
| Maximum RMS voltage | V_{RWS} | 42 | V |
| Maximum DC blocking voltage | V_{DC} | 60 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | Total device | 10 |
| | | Per diode | 5 |
| Peak forward surge current 8.3ms half-sine-wave | I_{FSM} | 150 | A |
| I^2t Rating for Fusing($t < 8.3ms$) | I^2t | 93.375 | A ² s |
| Typical Thermal Resistance | TO-220AB | $R_{\theta JA}$ | 12.0 |
| | | $R_{\theta JC}$ | 2.5 |
| | | $R_{\theta JL}$ | 3.0 |
| | ITO-220AB | $R_{\theta JC}$ | 4.5 |
| | TO-252 | $R_{\theta JC}$ | 2.5 |
| | TO-263 | $R_{\theta JC}$ | 2.5 |
| Typical junction capacitance: $V_R=4.0v, f=1MHz$ | C_J | 370 | pF |
| Junction temperature | T_J | 150 | °C |
| Storage temperature range | T_{STG} | -55~150 | °C |



Electrical Characteristics

| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | | | UNITS | |
|----------------------------------------------------------|-----------------|-----------|-------|-----|------|-------|---|
| | | | Min | Typ | Max | | |
| Breakdown voltage per diode(min) | IR=0.5mA | V_{BR} | 60 | - | - | V | |
| Instantaneous forward voltage | IF=5.0A | TA= 25°C | VF | - | 0.52 | 0.55 | V |
| | | TA= 125°C | VF | - | 0.42 | 0.45 | V |
| Maximum DC reverse current @Rated DC Blocking Vlotage | TA= 25°C | IR | - | 60 | 150 | μ A | |
| | TA=125°C | IR | - | 20 | 50 | mA | |

ODERING PACK INFORMATION

| Part No. | Packge | Packing | Quatity(pcs/box) | Quantity(pcs/carton) |
|-------------|---------|--------------|------------------|----------------------|
| MBR1060LCT | TO-220 | 50pcs/Tube | 1000 | 5000 |
| MBRF1060LCT | ITO-220 | 50pcs/Tube | 1000 | 5000 |
| MBRD1060LCT | TO-252 | 80pcs/Tube | 4000 | 40000 |
| MBRD1060LCT | TO-252 | 2500pcs/Reel | 2500 | 12500/25000 |
| MBRB1060LCT | TO-263 | 50pcs/Tube | 1000 | 5000/10000 |
| MBRB1060LCT | TO-263 | 800pcs/Reel | 800 | 4000/8000 |



Rating And Characteristics Curves

FIG.1-FORWARD CURRENT DERATING CURVE

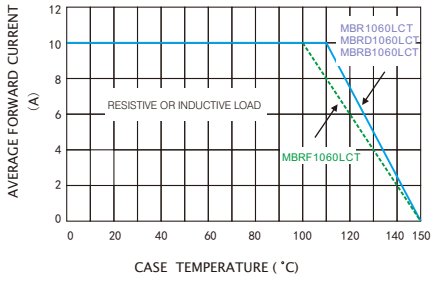


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

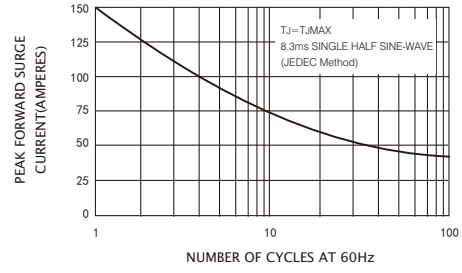


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

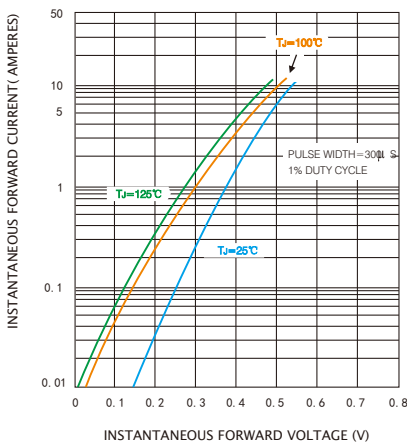


FIG.4-TYPICAL REVERSE CHARACTERISTICS

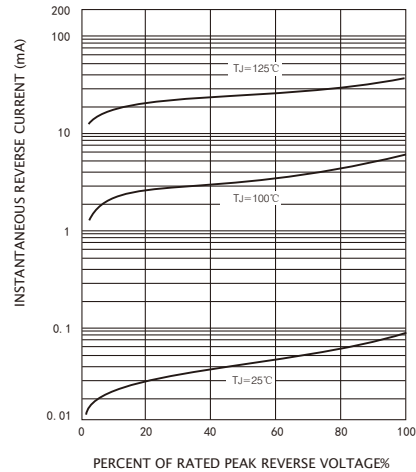
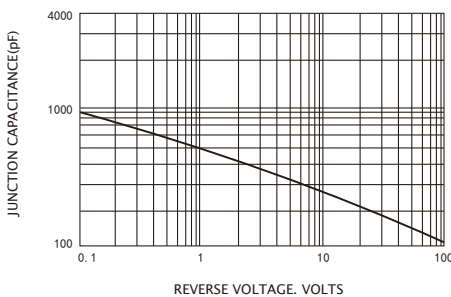


FIG.5-TYPICAL JUNCTION CAPACITANCE

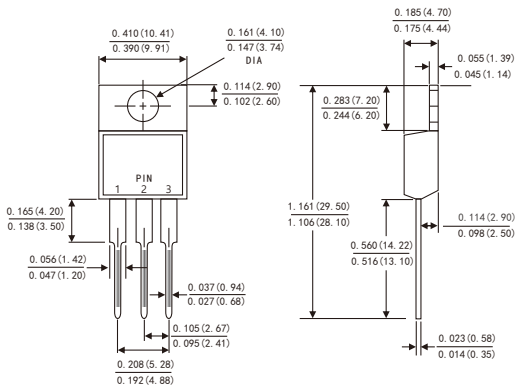




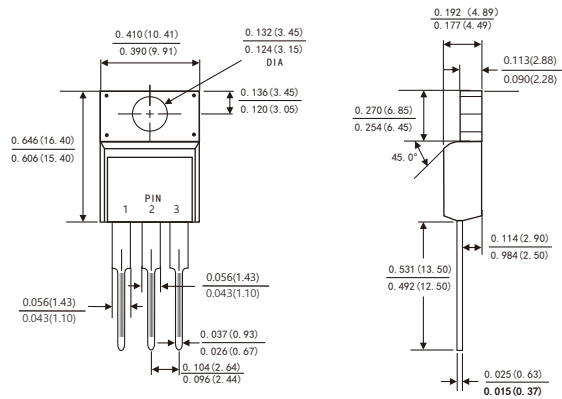
Package Outline Dimensions

Dimensions in inches and (millimeters)

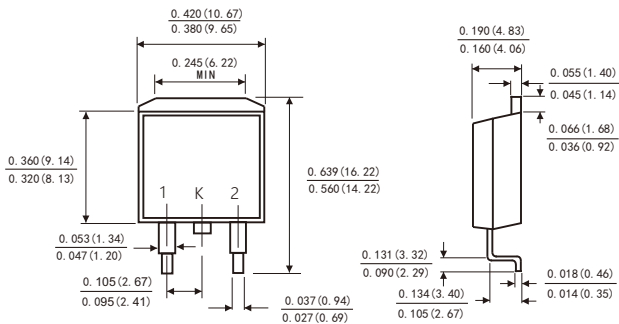
TO-220AB



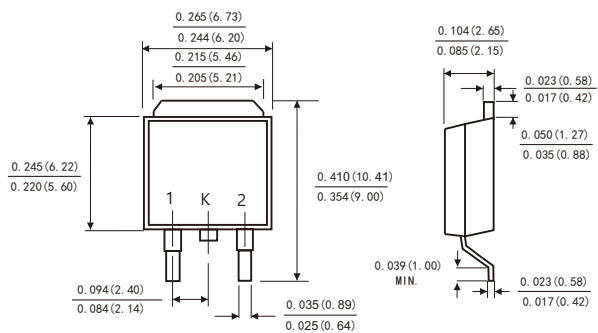
ITO-220AB



TO-263

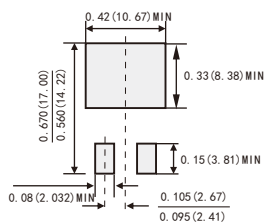


TO-252



Suggested Pad Layout

(TO-263)



Suggested Pad Layout

(TO-252)

