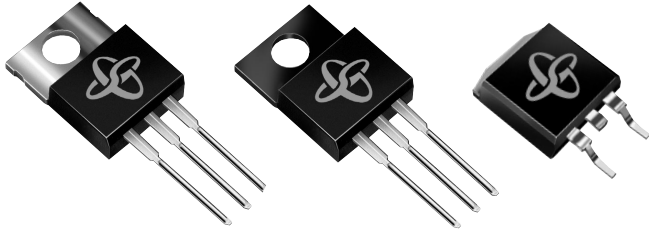


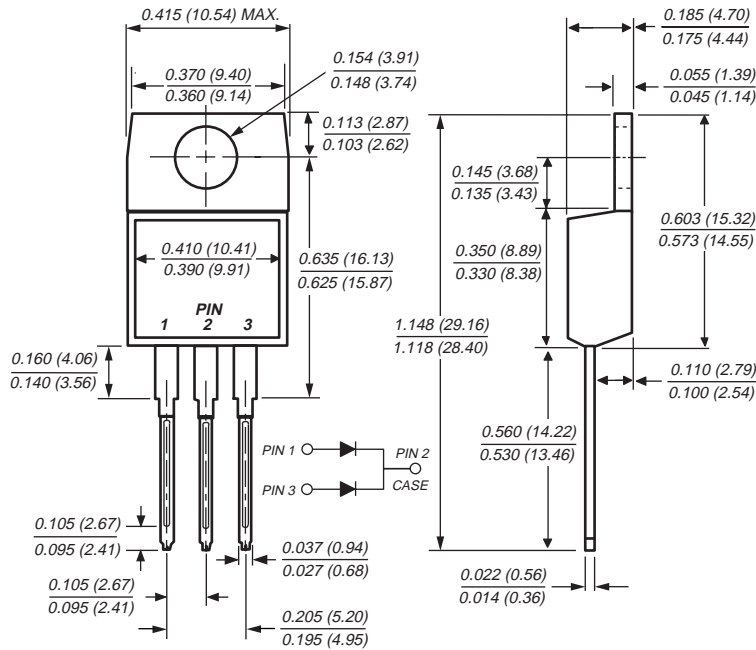
MBR20xxCT, MBRF20xxCT & MBRB20xxCT Series

Dual Schottky Barrier Rectifier

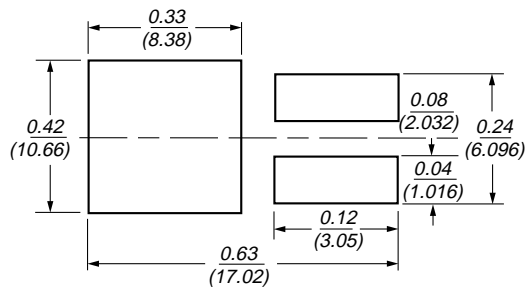
Reverse Voltage 35 to 60V
Forward Current 20A



TO-220AB (MBR20xxCT)

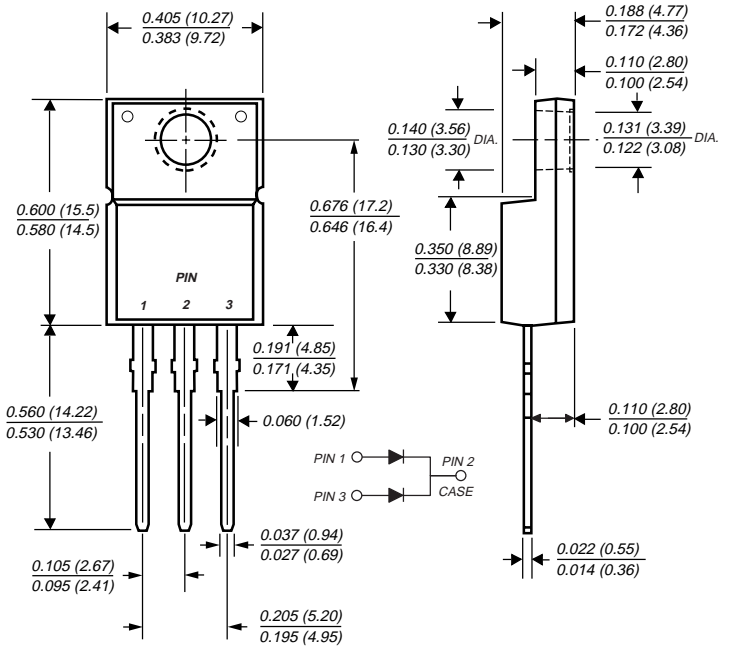


Mounting Pad Layout TO-263AB

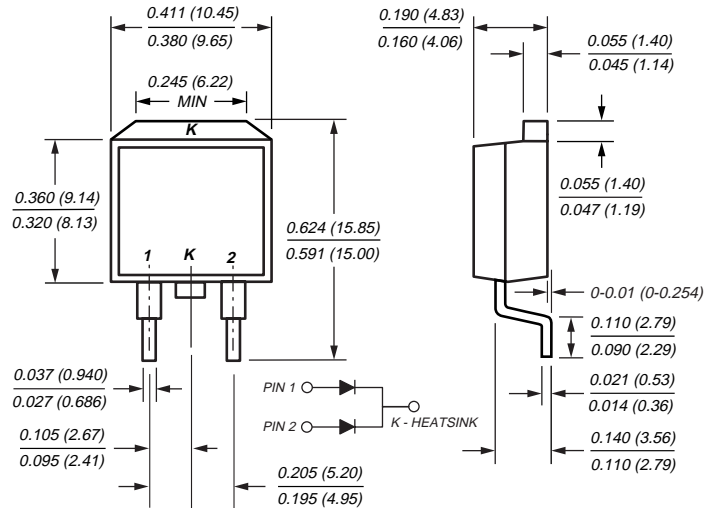


Dimensions in inches and (millimeters)

ITO-220AB (MBRF20xxCT)



TO-263AB (MBRB20xxCT)



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case

Mechanical Data

Case: JEDEC TO-220AB, ITO-220AB & TO-263AB molded plastic body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in-lbs maximum

Weight: 0.08 ounce, 2.24 grams

MBR20xxCT, MBRF20xxCT & MBRB20xxCT Series

Dual Schottky Barrier Rectifier

Maximum Ratings (T_C = 25°C unless otherwise noted)

| Parameter | Symbol | MBR2035CT | MBR2045CT | MBR2050CT | MBR2060CT | Unit |
|--|--------------------|---|-----------|-----------|-----------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 35 | 45 | 50 | 60 | V |
| Working peak reverse voltage | V _{RWM} | 35 | 45 | 50 | 60 | V |
| Maximum DC blocking voltage | V _{DC} | 35 | 45 | 50 | 60 | V |
| Maximum average forward rectified current <i>Total device</i> at T _C = 135°C <i>Per leg</i> | I _{F(AV)} | 20 10 | | | | A |
| Peak repetitive forward current per leg at T _C = 135°C (rated V _R , sq. wave 2.0 KHz) | I _{FRM} | 20 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg | I _{FSM} | 150 | | | | A |
| Peak repetitive reverse surge current per leg at t _p = 2μs, 1KHz | I _{RRM} | 1.0 | | 0.5 | | A |
| Voltage rate of change (rated V _R) | dv/dt | 10,000 | | | | V/μs |
| Operating junction temperature range | T _J | -65 to +150 | | | | °C |
| Storage temperature range | T _{STG} | -65 to +175 | | | | °C |
| RMS Isolation voltage (MBRF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 30% | V _{ISOL} | 4500 (NOTE 1) 3500 (NOTE 2) 1500 (NOTE 3) | | | | V |

Electrical Characteristics (T_C = 25°C unless otherwise noted)

| Parameter | Symbol | MBR2035CT | MBR2045CT | MBR2050CT | MBR2060CT | Unit |
|--|----------------|---------------------------|-----------|------------------------------|-----------|------|
| Maximum instantaneous forward voltage per leg (Note 4) at I _F = 10A, T _C = 25°C at I _F = 10A, T _C = 125°C at I _F = 20A, T _C = 25°C at I _F = 20A, T _C = 125°C | V _F | – 0.57 0.84 0.72 | | 0.80 0.70 0.95 0.85 | | V |
| Maximum reverse current per leg at rated DC blocking voltage (NOTE 4) | I _R | 0.1 15 | | 0.15 150 | | mA |

Thermal Characteristics (T_C = 25°C unless otherwise noted)

| Parameter | Symbol | MBR | MBRF | MBRB | Unit |
|--|------------------|-----|------|------|------|
| Thermal resistance from junction to case per leg | R _{θJC} | 2.0 | 5.0 | 2.0 | °C/W |

Notes:

- (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
- (2) Clip mounting (on case), where leads do overlap heatsink
- (3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")
- (4) Pulse test: 300μs pulse width, 1% duty cycle

MBR20xxCT, MBRF20xxCT & MBRB20xxCT Series

Dual Schottky Barrier Rectifier

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

