



MBR1640DC~MBR16200DC

D²PAK SURFACE SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 40 to 200 Volt **CURRENT** 16 Ampere

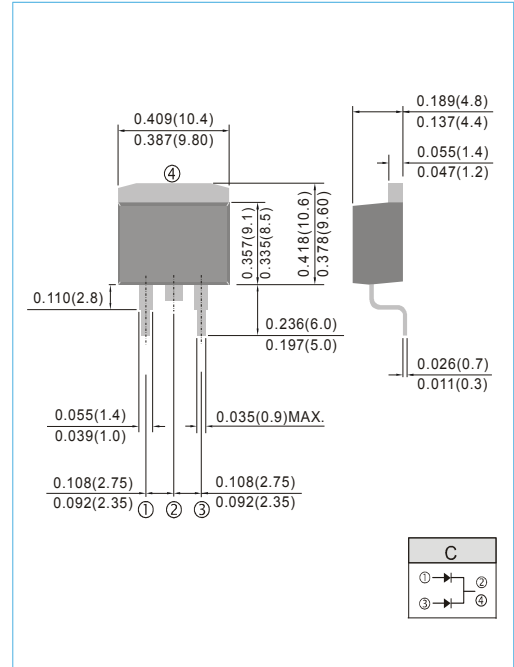
TO-263 / D²PAK Unit : inch(mm)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage,high frequency inverters free wheeling , and polarity protection applications.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: D²PAK/TO-263 molded plastic package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.049 ounces, 1.38 grams



MAXIMUM RATINGS

Ratings 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%

| PARAMETER | SYMBOL | MBR1640DC | MBR1645DC | MBR1650DC | MBR1660DC | MBR1680DC | MBR1690DC | MBR16100DC | MBR16150DC | MBR16200DC | UNITS | |
|--|-----------------|-------------|-----------|-----------|-----------|-------------|-----------|------------|------------|------------|-------------|-----------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V | |
| Maximum RMS Voltage | V_{RMS} | 28 | 31.5 | 35 | 42 | 56 | 63 | 70 | 105 | 140 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V | |
| Maximum Average Forward (See Figure 1) | $I_{F(AV)}$ | 16 | | | | | | | | | A | |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 150 | | | | | | | | | A | |
| Maximum Forward Voltage at 8.0A per leg | V_F | 0.70 | | 0.75 | | 0.80 | | | 0.90 | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$ | I_R | | | | | 0.05 | | 20 | | | mA | |
| Typical Thermal Resistance | $R_{\theta JC}$ | | | | | 2.0 | | | | | | $^{\circ}C / W$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | -65 to +175 | | | | | $^{\circ}C$ | |



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RATING AND CHARACTERISTIC CURVES

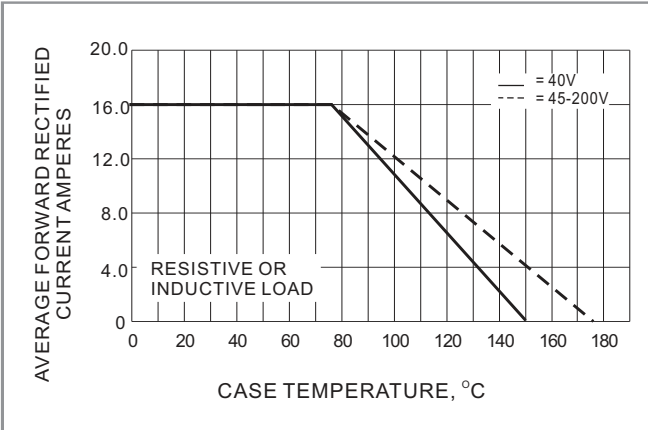


Fig.1 FORWARD CURRENT DERATING CURVE

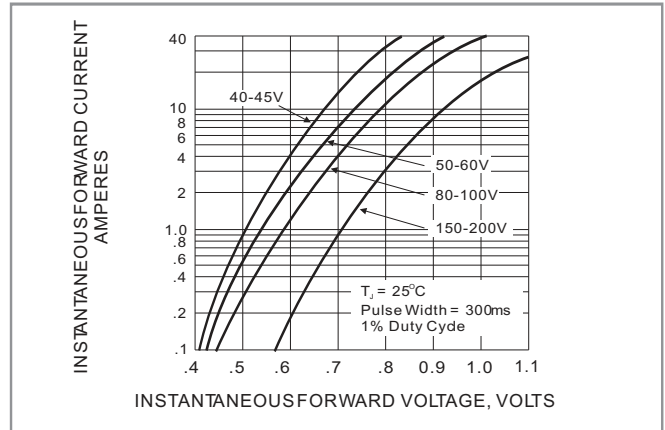


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

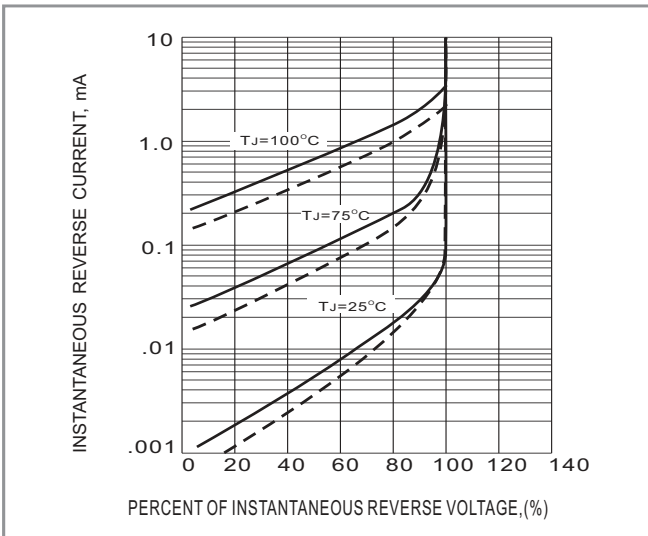


Fig.3 TYPICAL REVERSE CHARACTERISTICS

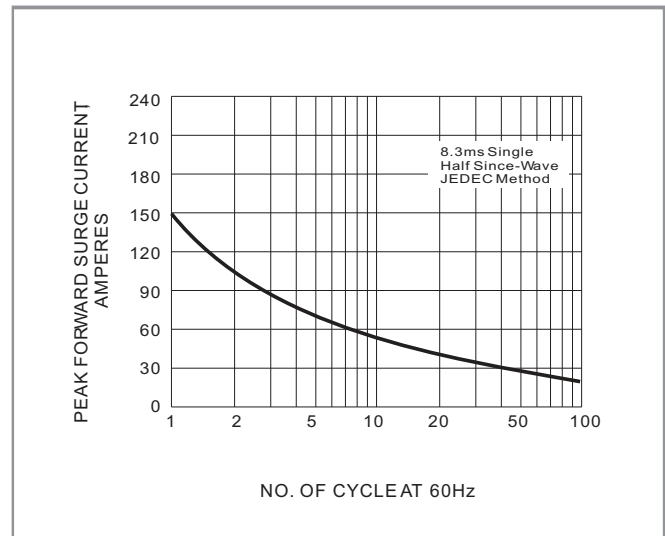


Fig.4 MAXIMUM NON-REPETITIVE SURGE CURRENT

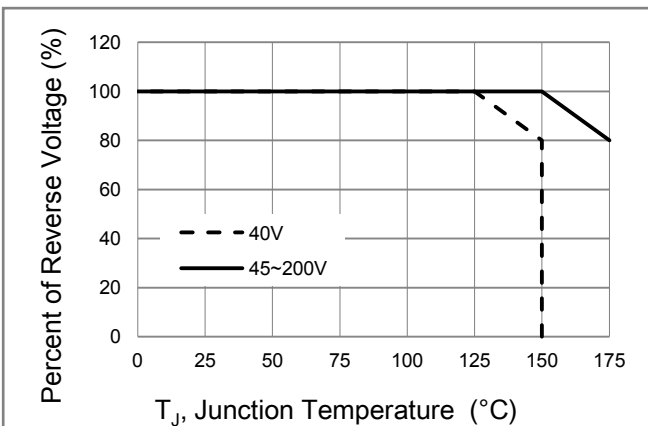


Fig.5 Operating Temperature Derating Curve

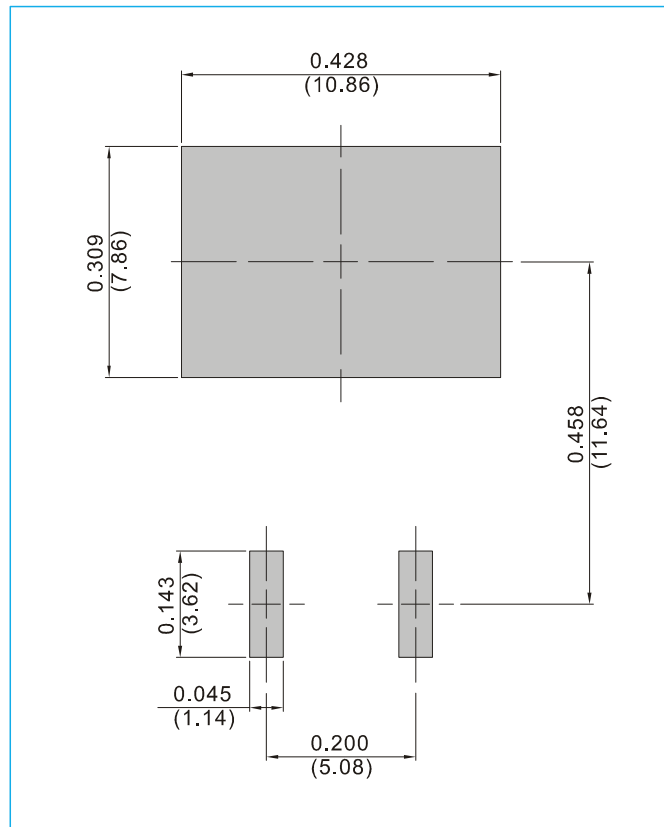


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MOUNTING PAD LAYOUT

TO-263 / D²PAK

Unit : inch(mm)



ORDER INFORMATION

- Packing information
T/R - 0.8K per 13" plastic Reel



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Part No_packing code_Version

MBR1640DC_R2_00001

For example :

RB500V-40_R2_00001



| Packing type | Packing Code XX | | | Version Code XXXXX | | |
|--------------------------------------|------------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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