

MBR1640DC~MBR16200DC

D²PAK SURFACE SCHOTTKY BARRIER RECTIFIERS

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

FEATURES

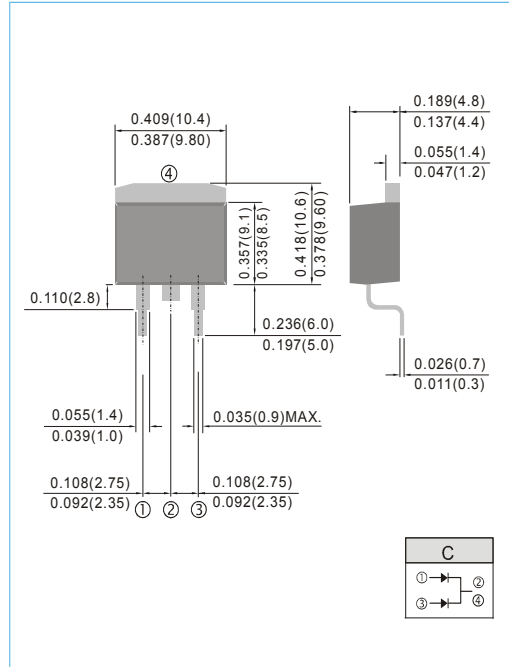
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling, 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

TO-263 / D²PAK

Unit : inch(mm)



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°C T _J =100°C | I _R | 0.05 20 | | | | | mA | | | | |
| Typical Thermal Resistance | R _{θJC} | 2.0 | | | | | | | | | °C / W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | -65 to +175 | | | | | | | °C |

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RATING AND CHARACTERISTIC CURVES

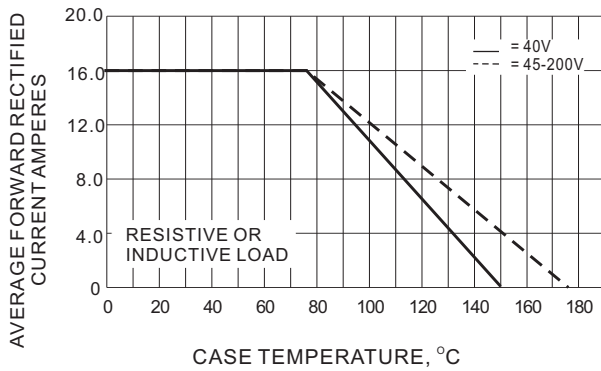


Fig.1 FORWARD CURRENT DERATING CURVE

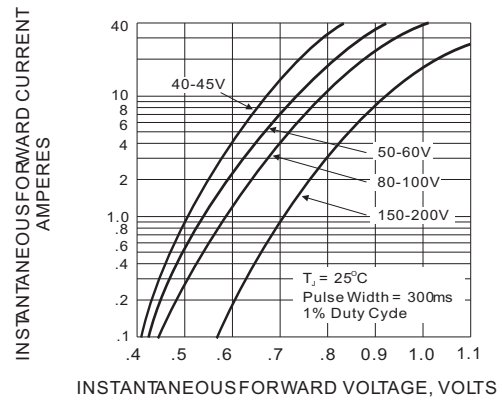


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

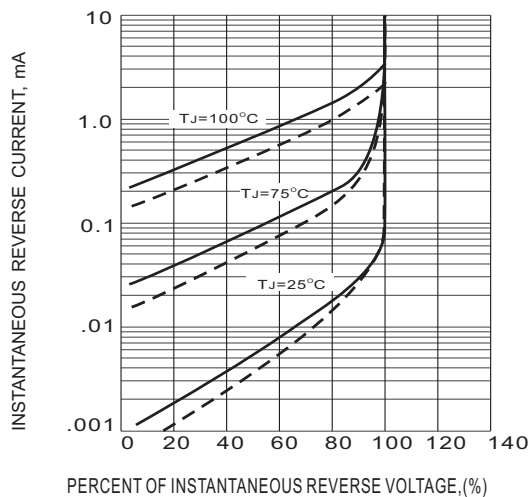


Fig.3 TYPICAL REVERSE CHARACTERISTICS

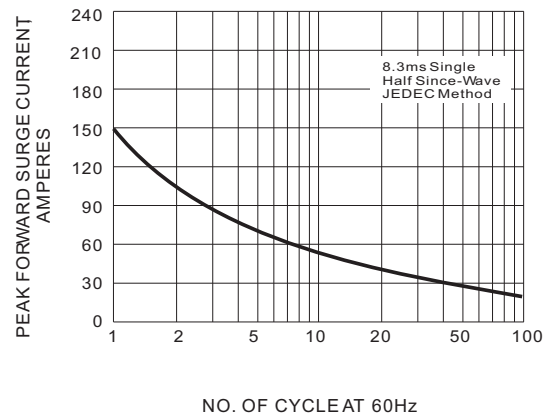


Fig.4 MAXIMUM NON - REPETITIVE SURGE CURRENT

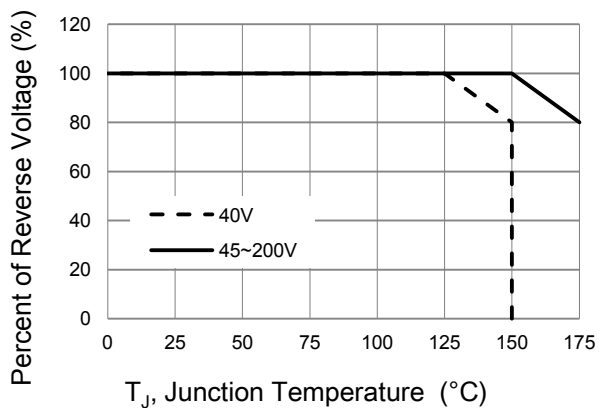


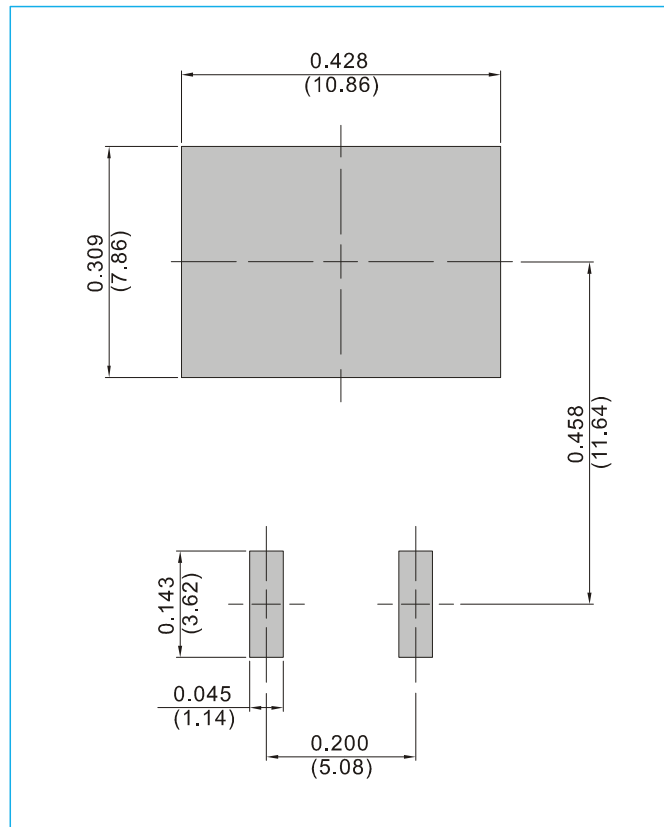
Fig.5 Operating Temperature Derating Curve

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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

MBR1640DC~MBR16200DC

Part No_packing code_Version

MBR1640DC_R2_00001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|--------------------|----------------------|---------------------------------------|
| Packing type | 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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