



# MBR1040DC~MBR10200DC

## D<sup>2</sup>PAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 40 to 200 Volts **CURRENT** 10 Amperes

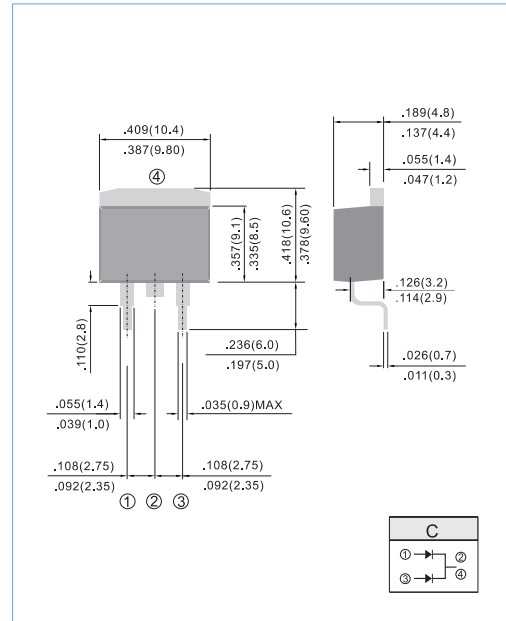
**TO-263 / D<sup>2</sup>PAK** Unit: inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- 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.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: D<sup>2</sup>PAK Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.0514 ounces, 1.46 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	MBR1040DC	MBR1045DC	MBR1050DC	MBR1060DC	MBR1080DC	MBR1090DC	MBR10100DC	MBR10150DC	MBR10200DC	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)	$I_{F(AV)}$	10									A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	150									A
Maximum Forward Voltage at 5.0A per leg	$V_F$	0.70		0.75		0.80		0.90			V
Maximum DC Reverse Current at $T_J=25^{\circ}C$ Rated DC Blocking Voltage $T_J=100^{\circ}C$	$I_R$	0.05 20									mA
Typical Thermal Resistance	$R_{\theta JC}$	3.0									$^{\circ}C / W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150									$^{\circ}C$



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## RATING AND CHARACTERISTIC CURVES

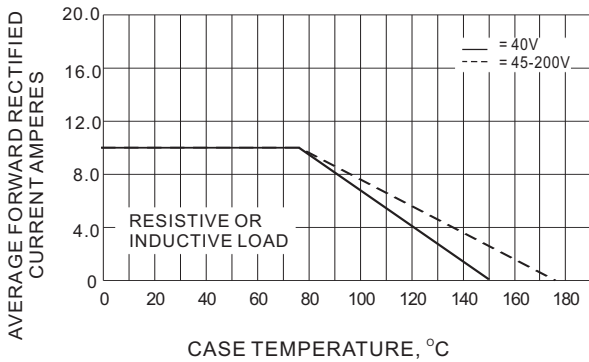


Fig.1- FORWARD CURRENT DERATING CURVE

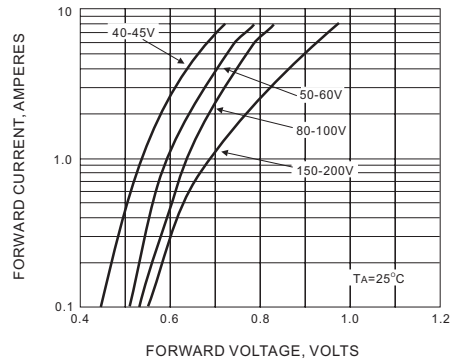


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

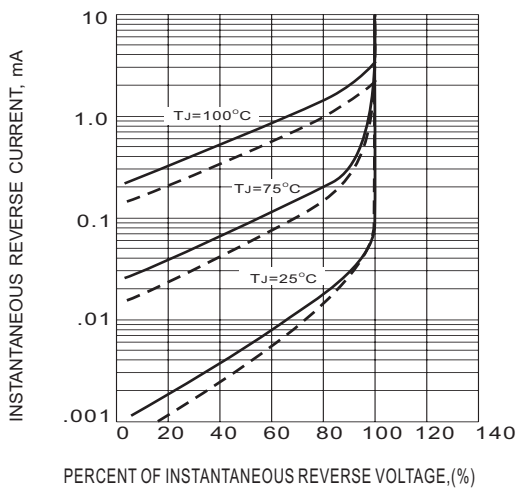


Fig.3- TYPICAL REVERSE CHARACTERISTICS

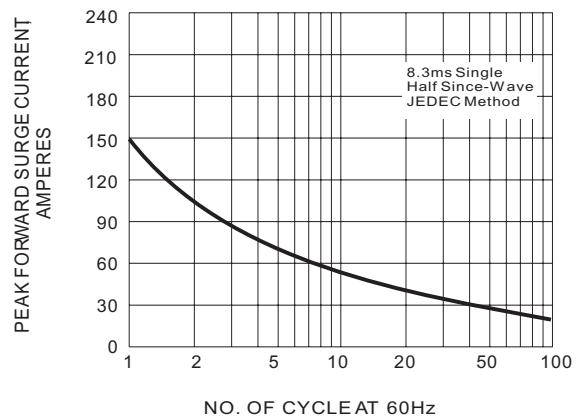


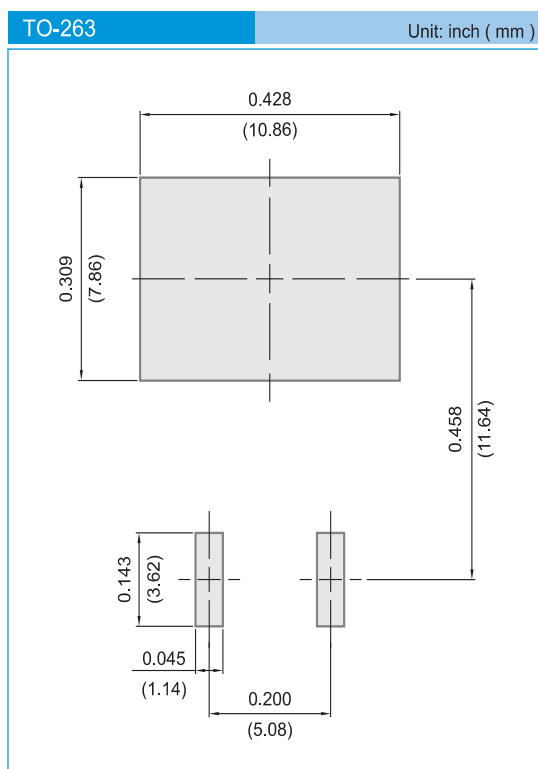
Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT




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## MOUNTING PAD LAYOUT

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## ORDER INFORMATION

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

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## LEGAL STATEMENT

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