

CURRENT 20 Ampere
 VOLTAGE RANG 40 to 200 Volts

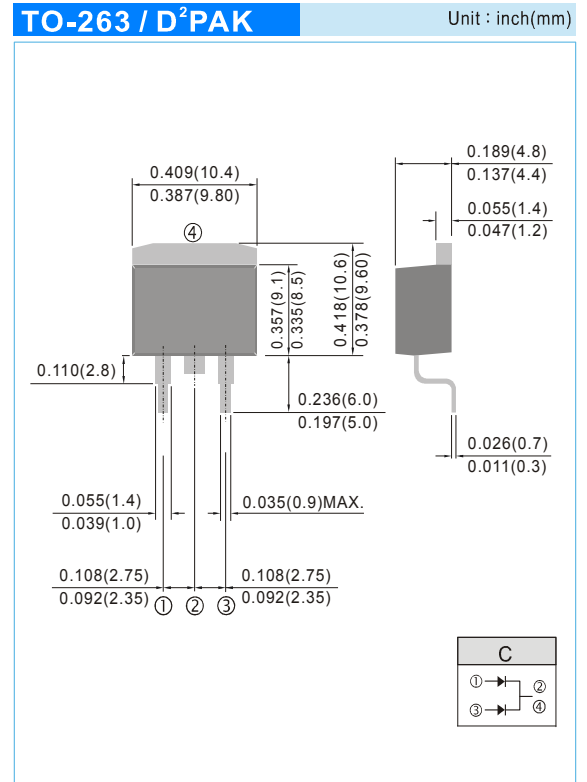
MBR2040DC THRU MBR20200DC

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- High current capability
- 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: TO-263 / D²PAK molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.049 ounces, 1.38 grams.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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	MBR20	MBR20	MBR20	MBR20	MBR20	MBR20	MBR20	MBR20	MBR20	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 Current (See fig.1)	$I_{F(AV)}$	20									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200									A
Maximum Forward Voltage at 10A, per leg	V_F	0.7		0.75			0.8			0.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_C=25^\circ C$ $T_C=125^\circ C$	I_R	0.05 20									mA
Typical Thermal Resistance	$R_{\theta JC}$	2									°C / W
Operating Junction Temperature Range	T_J	-50 to + 150									°C
Storage Temperature Range	T_{STG}	-50 to + 150									°C

Notes :

Both Bonding and Chip structure are available.

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RATING AND CHARACTERISTIC CURVES

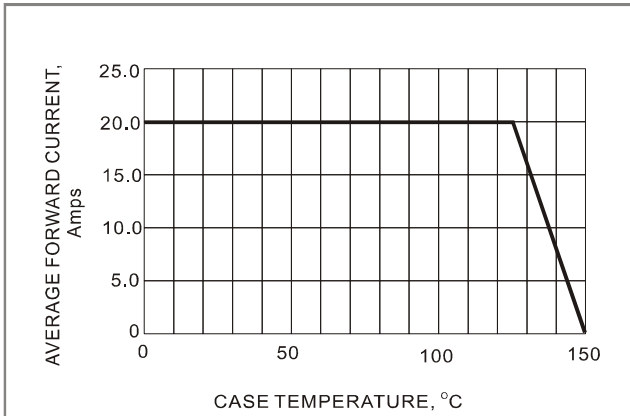


Fig.1- FORWARD CURRENT DERATING CURVE

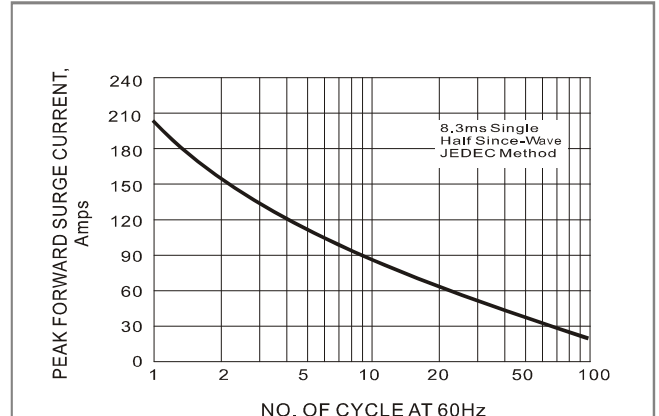


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

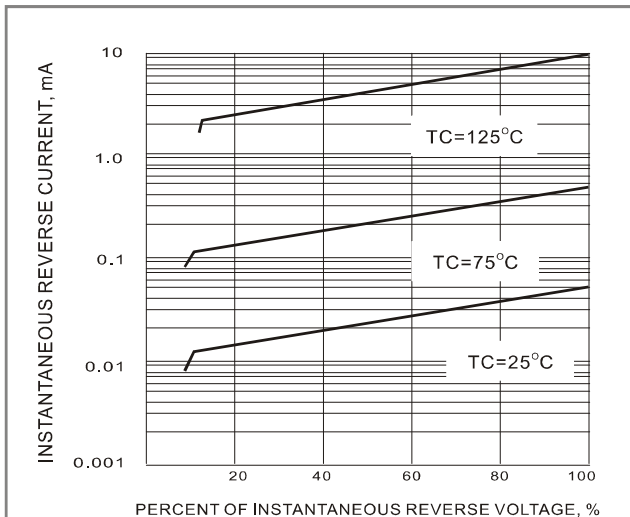


Fig.3- TYPICAL REVERSE CHARACTERISTICS

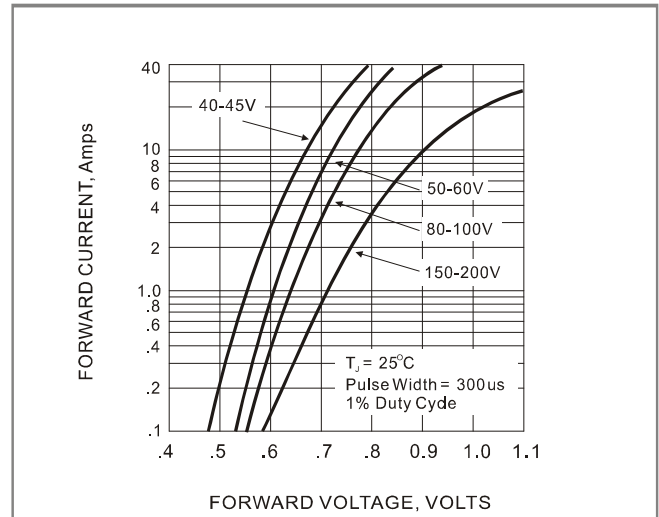


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

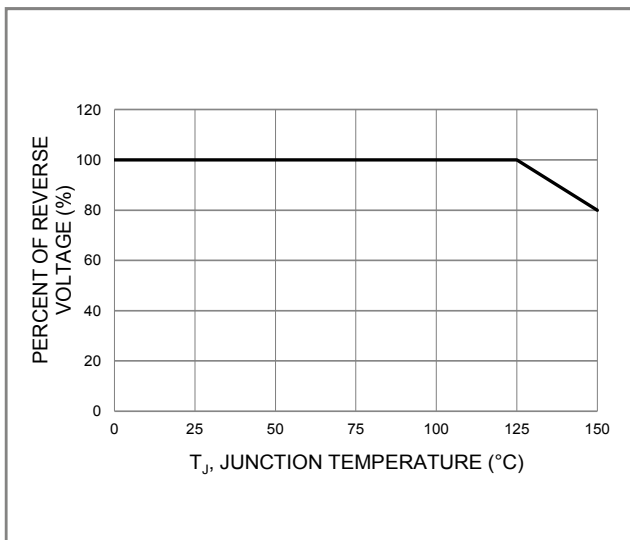
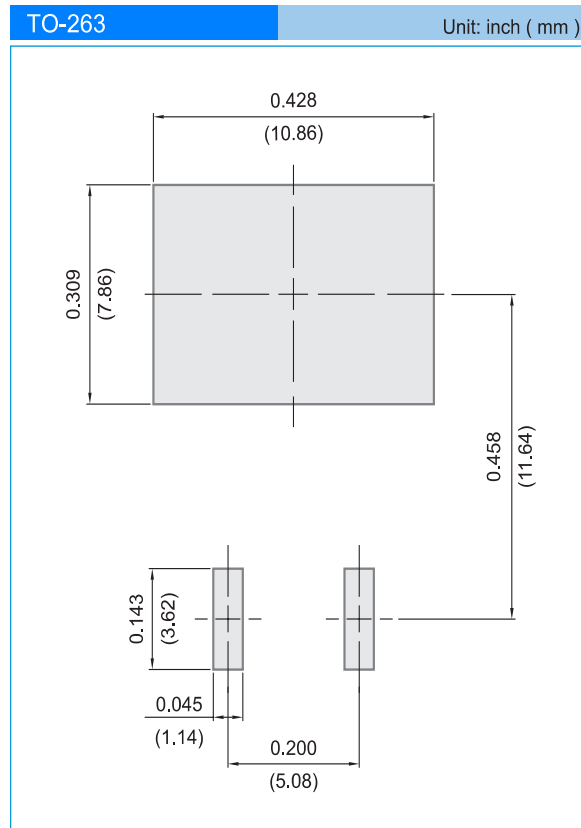


Fig.5- OPERATING TEMPERATURE DERATING CURVE

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MOUNTING PAD LAYOUT



ORDER INFORMATION

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