

CURRENT 20 Ampere  
 VOLTAGE RANG 40 to 200 Volts

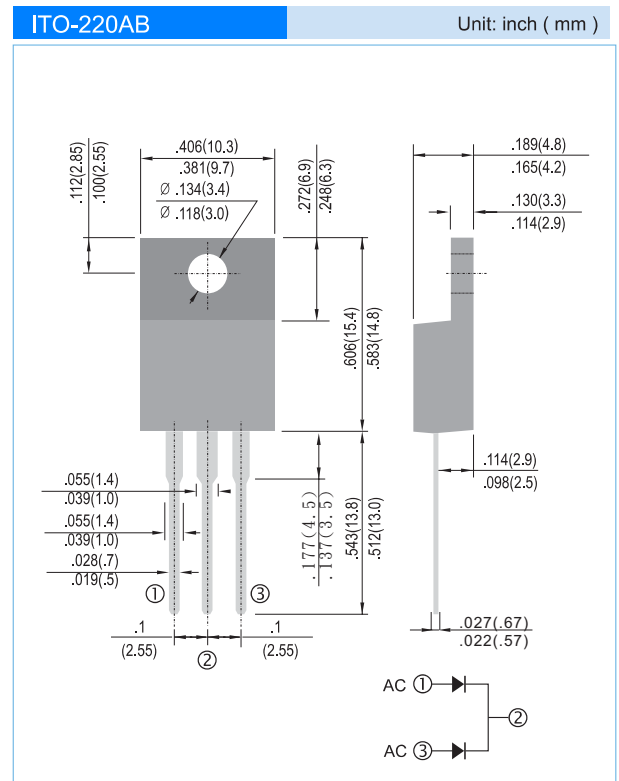
## MBR2040FCT THRU MBR20200FCT

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- Guardring for overvoltage protection
- 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: ITO-220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.055 ounces, 1.5615 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 40FCT | MBR20 45FCT | MBR20 50FCT | MBR20 60FCT | MBR20 80FCT | MBR20 90FCT | MBR20 100FCT | MBR20 150FCT | MBR20 120FCT | 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(JEDEC method)       | $I_{FSM}$       | 200         |             |             |             |             |             |              |              |              | A                           |
| Maximum Forward Voltage at 10A, per leg  | $V_F$           | 0.7         |             | 0.75        |             | 0.8         |             |              | 0.9          |              | V                           |
| Maximum DC Reverse Current $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j=125^\circ\text{C}$ | $I_R$           | 0.05<br>20  |             |             |             |             |             |              |              |              | mA                          |
| Typical Thermal Resistance   | $R_{\theta JC}$ | 2           |             |             |             |             |             |              |              |              | $^\circ\text{C} / \text{W}$ |
| Operating and Storage Junction Temperature Range   | $T_J, T_{STG}$  | -55 to +150 |             |             |             | -65 to +175 |             |              |              |              | $^\circ\text{C}$            |

Notes :

Both Bonding and Chip structure are available.

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RATING AND CHARACTERISTIC CURVES

