

### MBRF3040CTD~MBRF30200CTD

### 30 AMPERES SCHOTTKY BARRIER RECTIFIERS

VOLTAGE	40 to 200 Volts					
CURRENT	30 Amperes					

#### **FEATURES**

 Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
Flame Retardant Epoxy Molding Compound.

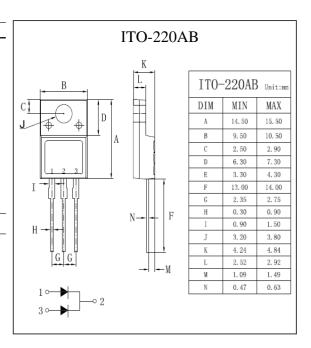
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- · High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarlity protection applications.
- Lead free in comply with EU RoHS 2011/65/EU directives

#### **MECHANICAL DATA**

• Case: ITO-220AB molded plastic

• Terminals: solder plated, solderable per MIL-STD-750, Method 2026

Polarity: As marked.Mounting Position: Any



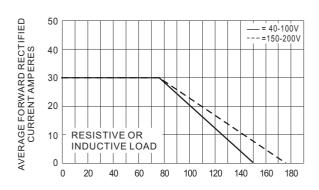
#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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	MBRF 3 0 4 0 CTD	MBRF 3045CTD	MBRF 3050CTD	MBRF 3060CTD	MBRF 3080CTD	MBRF 3090CTD	MBRF 30100CTD	MBRF 30150CTD	MBRF 30200CTD	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	30									А
Peak Forward Surge Current: 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200									А
Maximum Forward Voltage at 15A per leg	V <sub>F</sub>	0.	0.7 0.8 0.85 0.9				92	V			
$\begin{array}{ccc} \text{Maximum DC Reverse Current} & \text{T}_{j}\text{=}25~^{\circ}\text{C} \\ \text{at Rated DC Blocking Voltage} & \text{T}_{j}\text{=}125^{\circ}\text{C} \end{array}$	I <sub>R</sub>	0.05 20									mA
Typical Thermal Resistance	R <sub>eJC</sub>	1.4									°C / W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150 -55 to + 175								°C	

## MBRF3040CTD~MBRF30200CTD

# RATING AND CHARACTERISTIC CURVES



LEAD TEMPERATURE, °C

Fig.1-FORWARD CURRENT DERATING CURVE

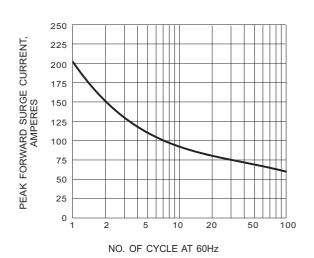


Fig.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

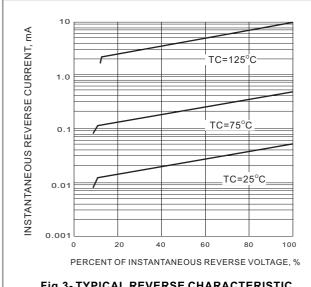


Fig.3-TYPICAL REVERSE CHARACTERISTIC

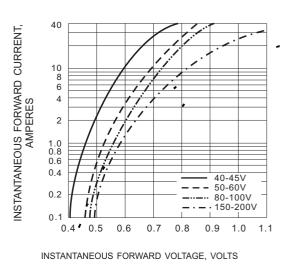


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



## MBRF3040CTD~MBRF30200CTD

## **Important Notice and Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from DIYI.
- DIYI reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- DIYI disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- DIYI does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.
  - DIYI makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.