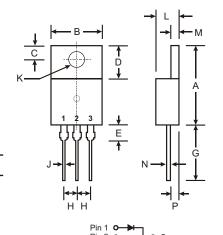


# MBR1070CT - MBR10100CT

### 10A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

#### **Features**

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0



TO-220AB					
Dim	Min	Max			
Α	14.22	15.88			
В	9.65	10.67			
С	2.54	3.43			
D	5.84	6.86			
E	_	6.35			
G	12.70	14.73			
Н	2.29	2.79			
J	0.51	1.14			
K	3.53Ø	4.09Ø			
L	3.56	4.83			
M	1.14	1.40			
N	0.30	0.64			
Р	2.03	2.92			
All Dimensions in mm					

#### **Mechanical Data**

Case: Molded Plastic

Terminals: Plated Leads Solderable per

MIL-STD-202, Method 208

Polarity: As Marked on Body

Weight: 2.24 grams (approx)

Mounting Position: Any

Marking: Type Number

## Maximum Ratings and Electrical Characteristics @ TA = 25°C unless otherwise specified

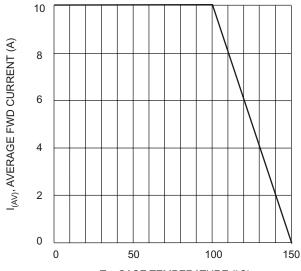
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic		MBR 1070CT	MBR 1080CT	MBR 1090CT	MBR 10100CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		70	80	90	100	V
RMS Reverse Voltage		49	56	63	70	V
Average Rectified Output Current (Note 1) @ T <sub>C</sub> = 100°C		10				А
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		120				А
Forward Voltage Drop  @ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 125°C @ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 25°C @ I <sub>F</sub> = 10A, T <sub>C</sub> = 125°C @ I <sub>F</sub> = 10A, T <sub>C</sub> = 25°C	V <sub>FM</sub>	0.75 0.85 0.85 0.95		V		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		0.1 50				mA
Typical Junction Capacitance (Note 2)		300				pF
Typical Thermal Resistance Junction to Case (Note 1)		3.0				K/W
Voltage Rate of Change		10,000				V/μs
Operating and Storage Temperature Range		-65 to +150				°C

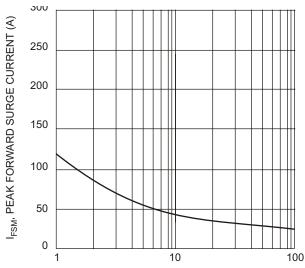
Notes: 1. Thermal resistance junction to case mounted on heatsink.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

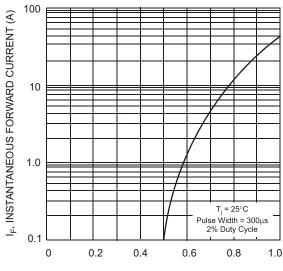




 $T_{\rm C}$ , CASE TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve







V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics

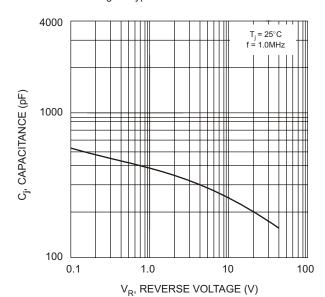


Fig. 4 Typical Junction Capacitance