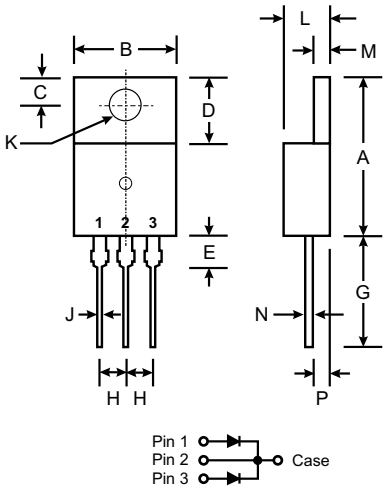
MBR1070CT - MBR10100CT

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**
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53∅	4.09∅
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	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 @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	MBR 1070CT	MBR 1080CT	MBR 1090CT	MBR 10100CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current (Note 1) @ T_C = 100°C	I_O	10				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120				A
Forward Voltage Drop @ I_F = 5.0A, T_C = 125°C @ I_F = 5.0A, T_C = 25°C @ I_F = 10A, T_C = 125°C @ I_F = 10A, T_C = 25°C	V_{FM}	0.75 0.85 0.85 0.95				V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 125°C	I_{RM}	0.1 50				mA
Typical Junction Capacitance (Note 2)	C_j	300				pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	3.0				K/W
Voltage Rate of Change	dV/dt	10,000				V/μs
Operating and Storage Temperature Range	T_j, T_{STG}	-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.

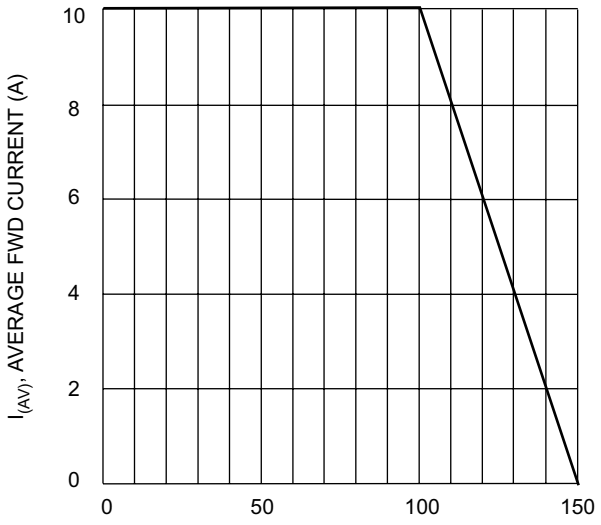


Fig. 1 Forward Current Derating Curve

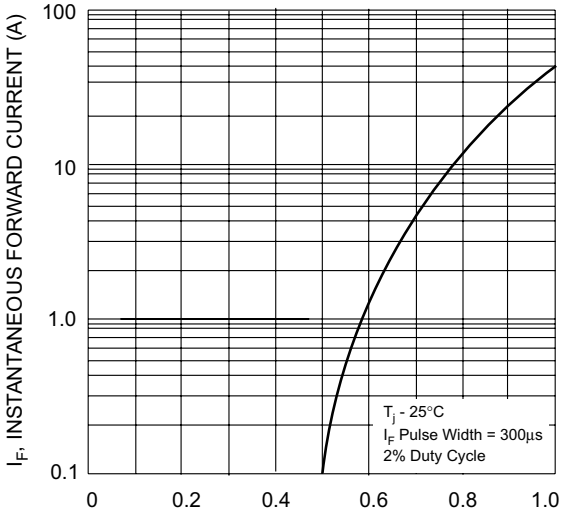


Fig. 2 Typical Forward Characteristics

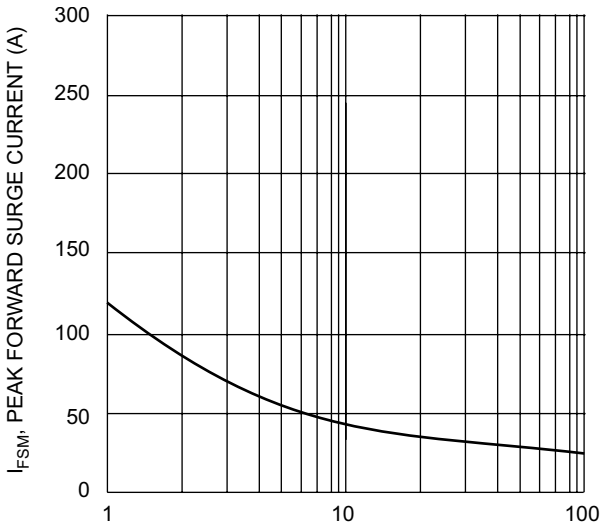


Fig. 3 Max Non-Repetitive Surge Current

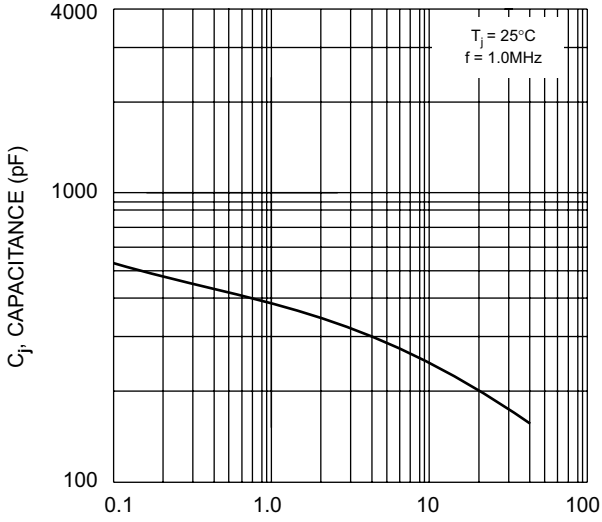


Fig. 4 Typical Junction Capacitance