MBR3040CT – MBR30200CT

30.0A SCHOTTKY BARRIER DIODE

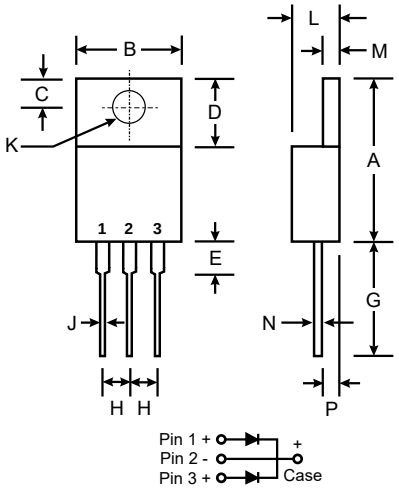
Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: TO-220AB, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version**

TO-220AB



TO-220AB		
Dim	**Min**	**Max**
A	13.90	15.90
B	9.60	10.70
C	2.54	3.43
D	5.75	6.85
E	3.56	4.56
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	1.10	1.40
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

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 3040 CT	MBR 3045 CT	MBR 3050 CT	MBR 3060 CT	MBR 30100 CT	MBR 30150 CT	MBR 30200 CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	45	50	60	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	31	35	42	70	105	140	V
Average Rectified Output Current @T_L = 75°C (Note 1)	I_O	30.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
Forward Voltage @I_F = 15A	V_{FM}	0.70		0.80		0.85		0.92	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	0.1 20							mA
Typical Junction Capacitance (Note 2)	C_j	350		280		200			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	3.0				2.0			°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150					-55 to +175		°C

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

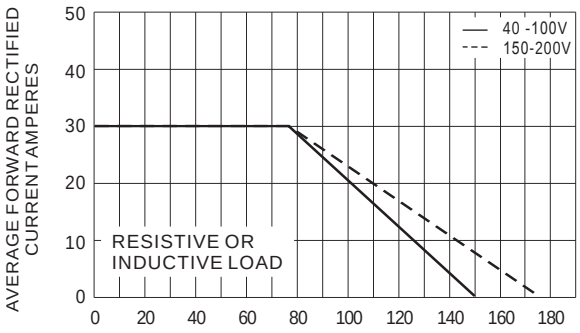


Fig.1- FORWARD CURRENT DERATING CURVE

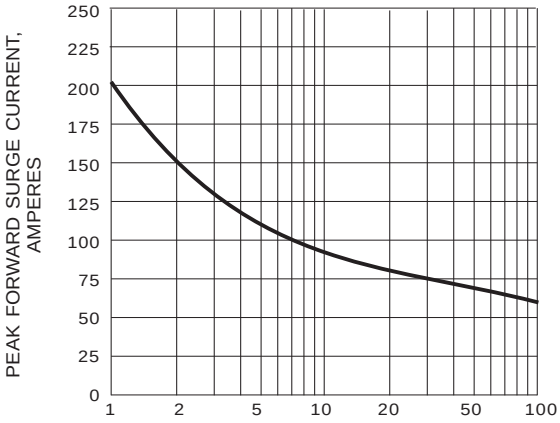


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

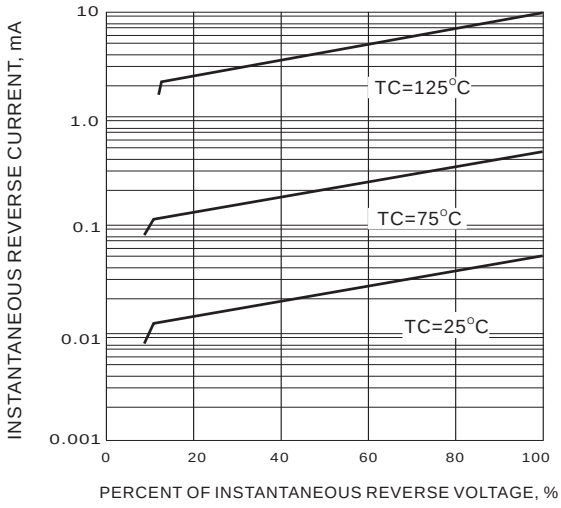


Fig.3- TYPICAL REVERSE CHARACTERISTIC

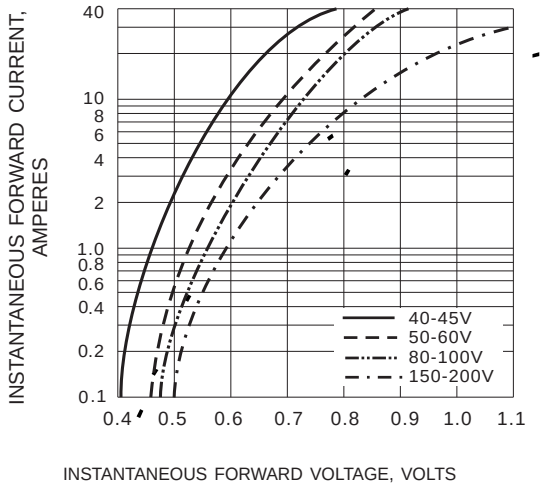


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC