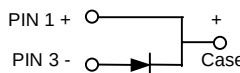
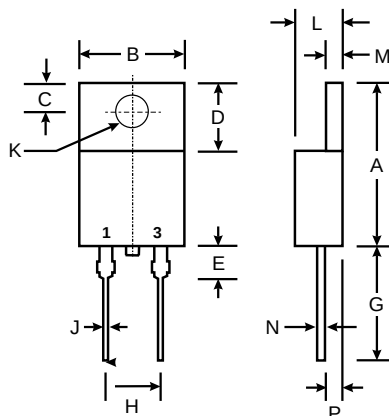


Features

- 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-220AC, 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-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.57	10.57
C	2.54	3.43
D	5.80	6.80
E	—	6.35
G	12.70	14.73
H	4.88	5.28
J	0.51	1.14
K	3.53Ø	4.14Ø
L	3.56	4.83
M	1.07	1.47
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 640	MBR 645	MBR 650	MBR 660	MBR 680	MBR 6100	MBR 6150	MBR 6200	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	40	45	50	60	80	100	150	200	V
RMS Reverse Voltage	VR(RMS)	28	31	35	42	56	70	105	140	V
Average Rectified Output Current @T _L =75°C (Note 1)	I _O	6.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100				120				A
Forward Voltage @I _F = 6A	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 _{θJA}	3.5				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.

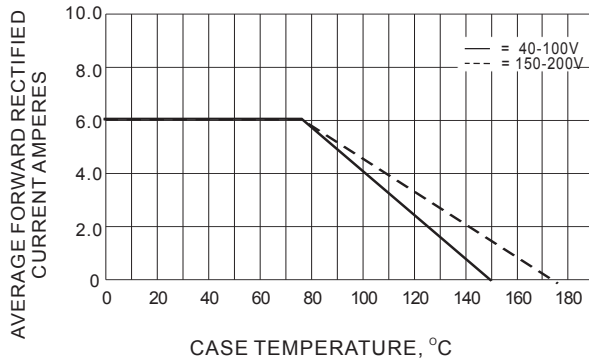


Fig.1- FORWARD CURRENT DERATING CURVE

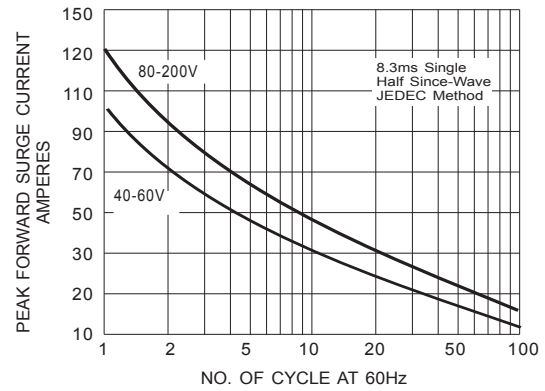


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

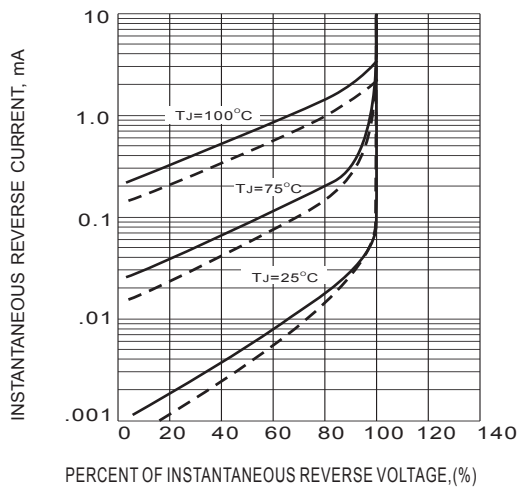


Fig.3- TYPICAL REVERSE CHARACTERISTICS

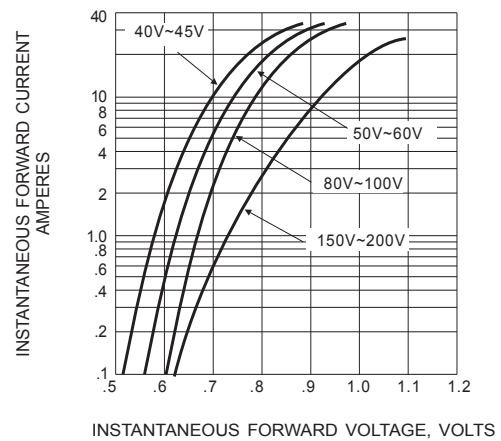


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS