LiKun-micro electronics

MBR620 – MBR6100

6.0A SCHOTTKY BARRIER RECTIFIER

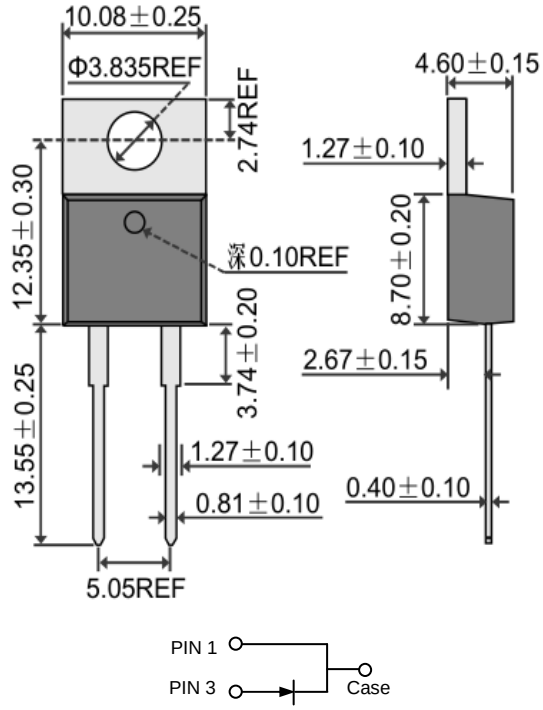
Features

- Power Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Current Capability
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: TO-220A, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.9 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.6 N.m Max.
- **Lead Free: For RoHS / Lead Free Version,**

TO-220AC



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 620	MBR 630	MBR 640	MBR 645	MBR 650	MBR 660	MBR 680	MBR 6100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	45	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	32	35	42	56	70	V
Average Rectified Output Current @T_C = 100°C	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}	75								A
Forward Voltage @I_F = 6.0A	V_{FM}	0.55				0.75		0.85		V
Peak Reverse Current @T_J = 25°C At Rated DC Blocking Voltage @T_J = 100°C	I_{RM}	0.2 15								mA
Typical Junction Capacitance (Note 1)	C_J	300				200		150		pF
Thermal Resistance Junction to Ambient Thermal Resistance Junction to Case	$R_{\theta JA}$ $R_{\theta JC}$	73 3.0								°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150								°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

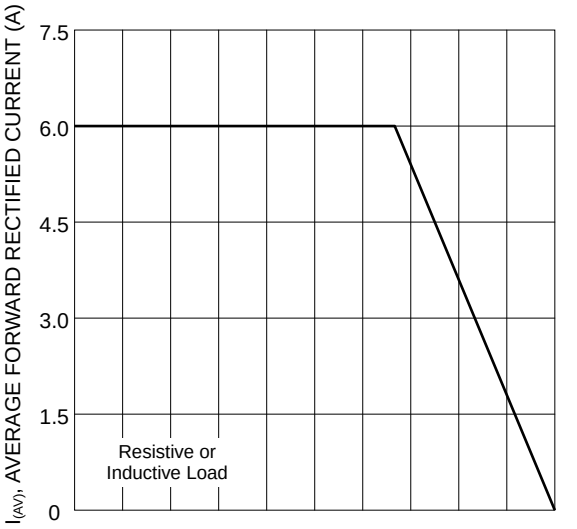


Fig. 1 Forward Current Derating Curve

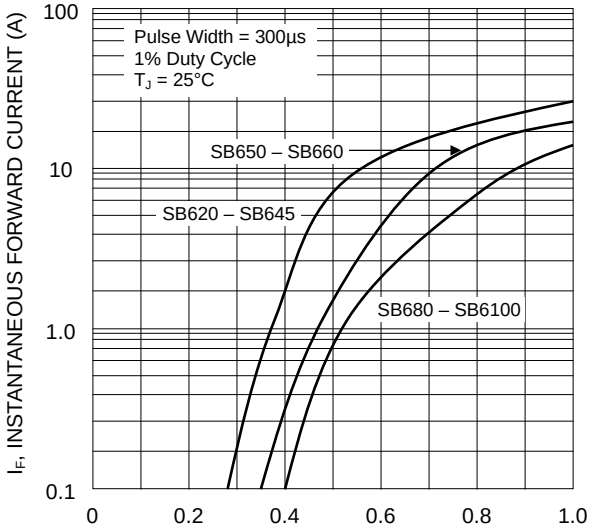


Fig. 2 Typical Forward Characteristics

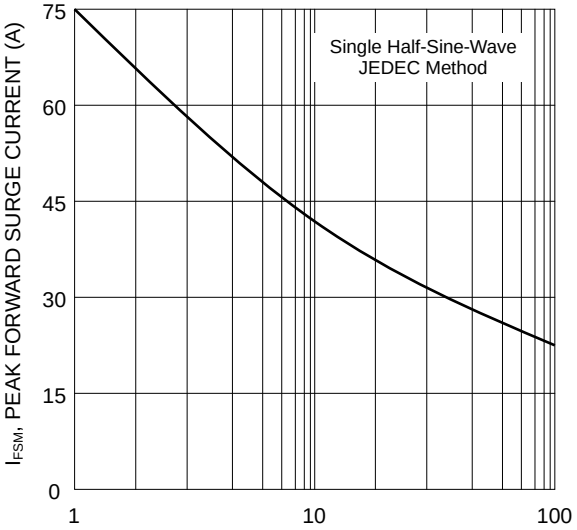


Fig. 3 Forward Surge Current Derating Curve

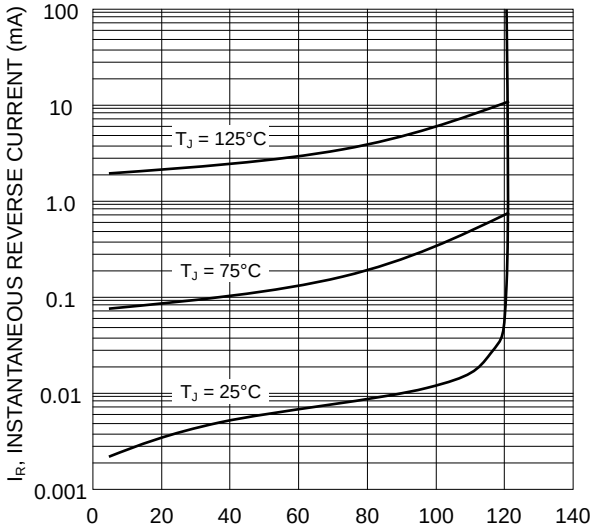


Fig. 4 Typical Reverse Characteristics

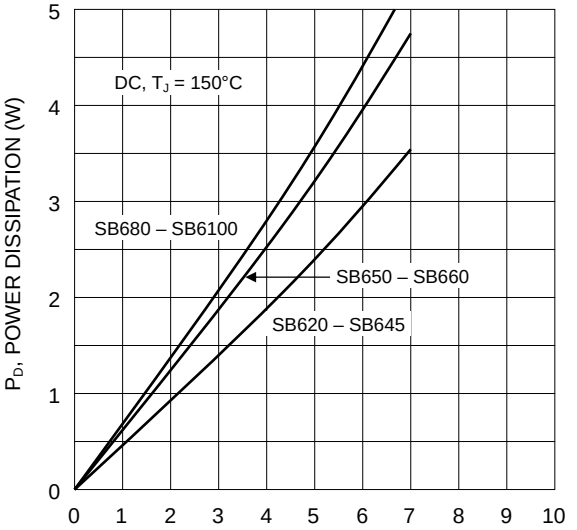


Fig. 5 Forward Power Dissipation

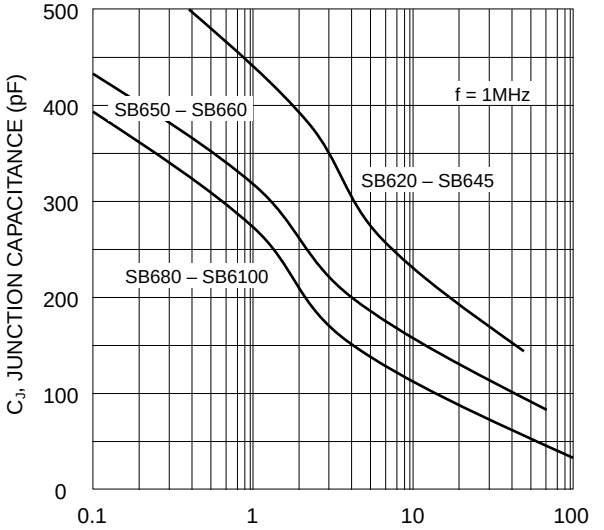
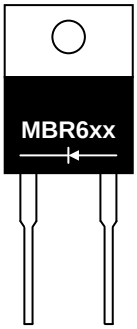


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



MBR6xx	= Device Number
xx	= 20, 30, 40, 45, 50, 60, 80 or 100
Polarity	= As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	558 x 150 x 40	1,000	570 x 235 x 170	5,000	11.85

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 4-40 hardware is used.

Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package. The insulating bushing inside the mounting hole will insure the screw threads do not contact the metal base.

The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.