

MBR620FCT – MBR6100FCT

6.0A DUAL SCHOTTKY BARRIER RECTIFIER

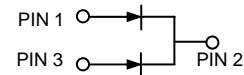
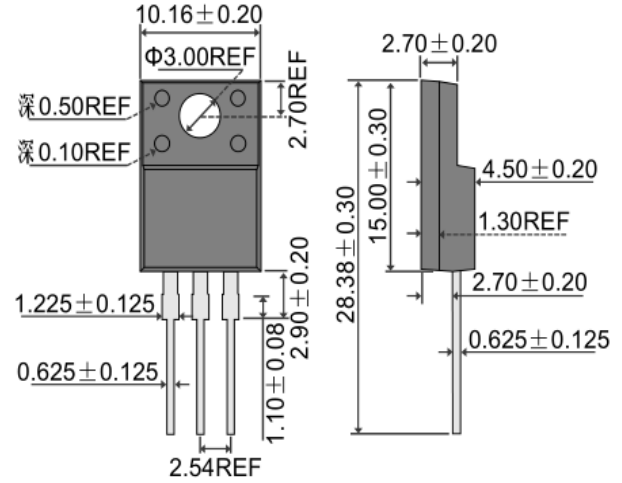
Features

- 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: ITO-220, Full 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**

ITO-220AB



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 620FCT	MBR 630FCT	MBR 640FCT	MBR 645FCT	MBR 650FCT	MBR 660FCT	MBR 680FCT	MBR 6100FCT	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 Total Device Per Diode	I _O	6.0 3.0								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 per diode @ _{I_F} = 3.0A	V _{FM}	0.55			0.75		0.85			V
Peak Reverse Current At Rated DC Blocking Voltage @ _{T_J} = 25°C @ _{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 per diode Thermal Resistance Junction to Case per diode	R _{JA} R _{JC}	62 4.5								°C/W
RMS Isolation Voltage, t = 1 min	V _{ISO}	1500								V
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.

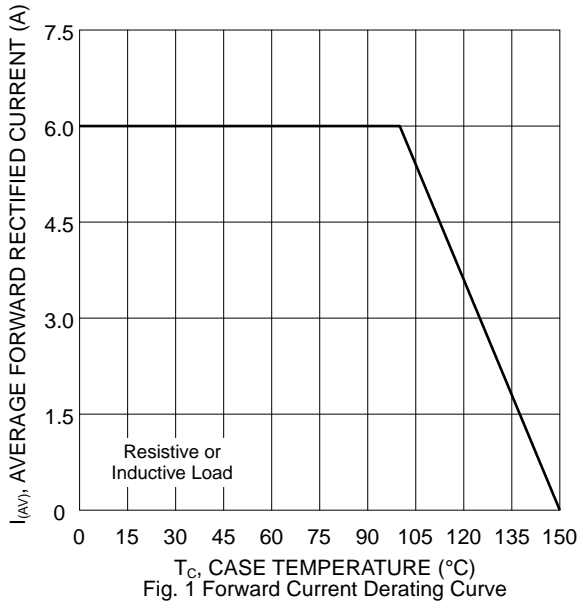


Fig. 1 Forward Current Derating Curve

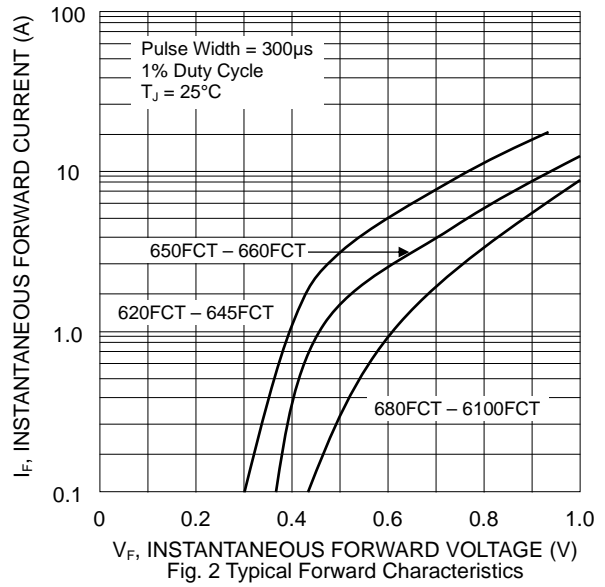


Fig. 2 Typical Forward Characteristics

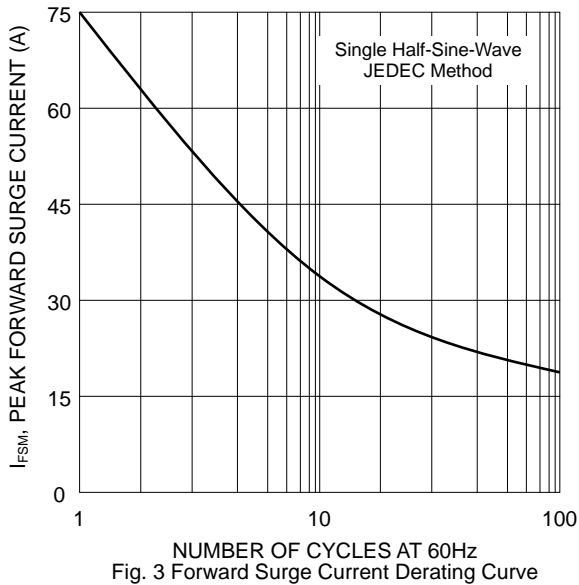


Fig. 3 Forward Surge Current Derating Curve

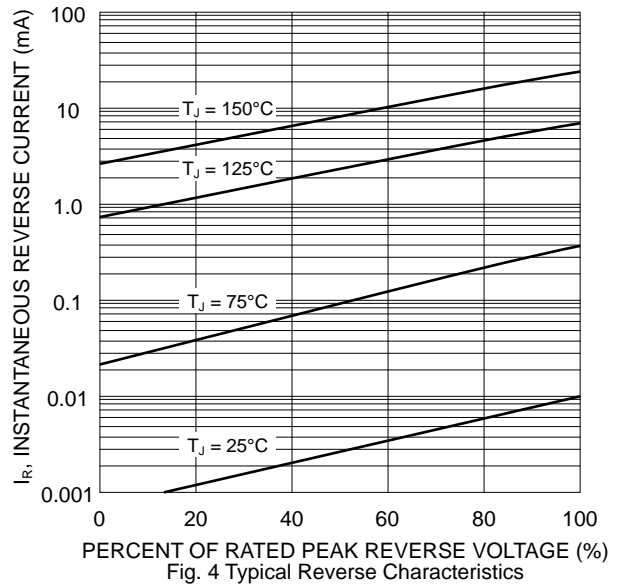


Fig. 4 Typical Reverse Characteristics

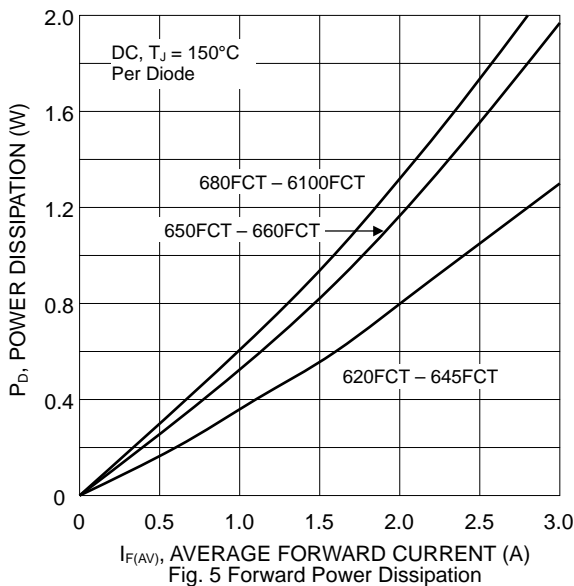


Fig. 5 Forward Power Dissipation

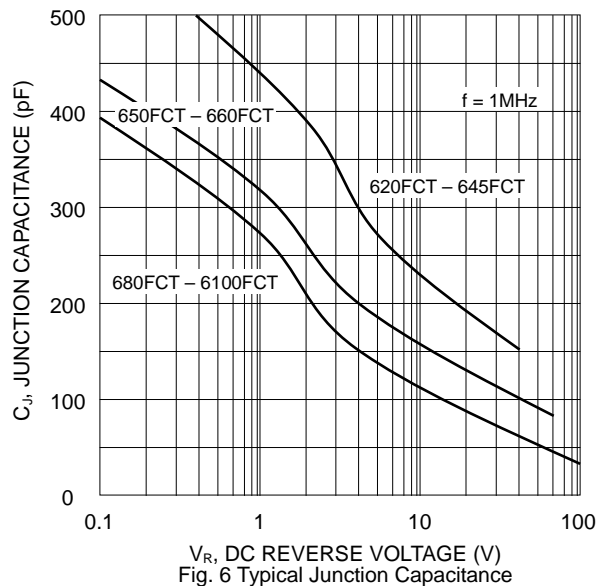
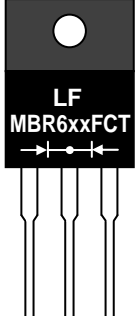


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



MBR6xxFCT = Device Number
 xx = 20, 30, 40, 45, 50, 60, 80 or 100
 Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

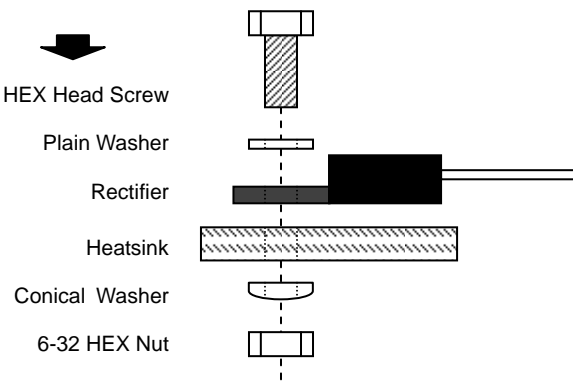
Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	558 x 150 x 40	1,000	570 x 235 x 170	5,000	11.85

RECOMMENDED SCREW MOUNTING ARRANGEMENT

The full molded plastic package affords a major reduction of hardware as compared to a standard TO-220 package. However, precautions should be made in mounting procedure.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause crack on device package.

A layer of thermal grease or thermal pad in the interface will be considerably helpful for heat dissipation.



6-32 HEX Head Screw

Plain Washer

Rectifier

Heatsink

Conical Washer

6-32 HEX Nut