

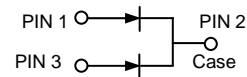
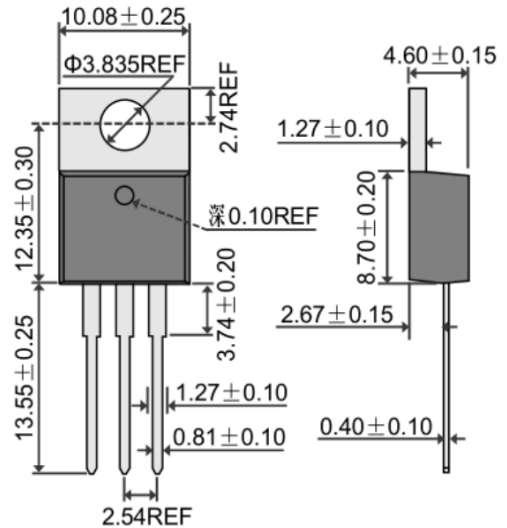
Features

- 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-220, 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-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 2520CT	MBR 2530CT	MBR 2540CT	MBR 2545CT	MBR 2550CT	MBR 2560CT	MBR 2580CT	MBR 25100CT	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	25 12.5								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 per diode @ _{I_F} = 12.5A, T _J = 25°C @ _{I_F} = 12.5A, T _J = 125°C	V _{FM}	0.62 0.57			0.75 0.65		0.85 0.75			V
Peak Reverse Current At Rated DC Blocking Voltage @ _{T_J} = 25°C @ _{T_J} = 100°C	I _{RM}	1.0 20								mA
Typical Junction Capacitance (Note 1)	C _J	750				500				pF
Thermal Resistance Junction to Ambient per diode Thermal Resistance Junction to Case per diode	R _{JA} R _{JC}	55 1.5								°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.

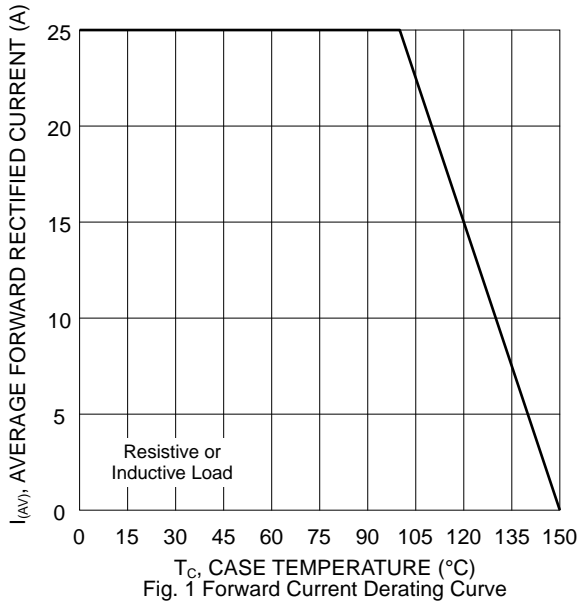


Fig. 1 Forward Current Derating Curve

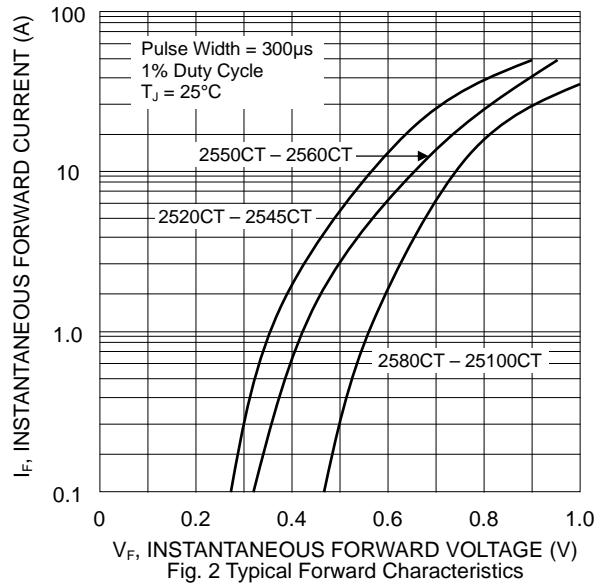


Fig. 2 Typical Forward Characteristics

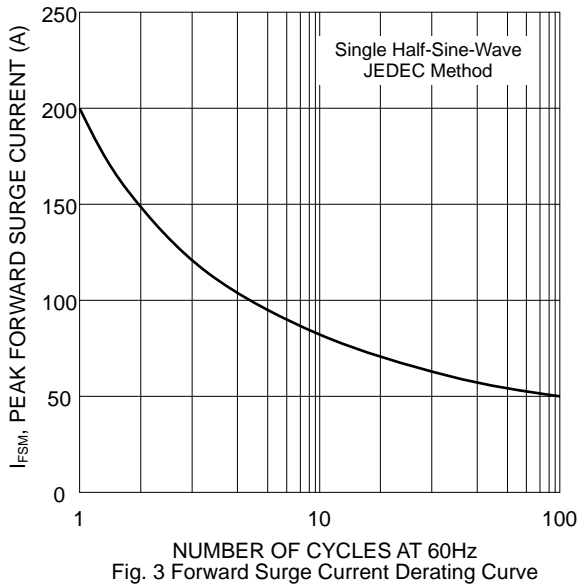


Fig. 3 Forward Surge Current Derating Curve

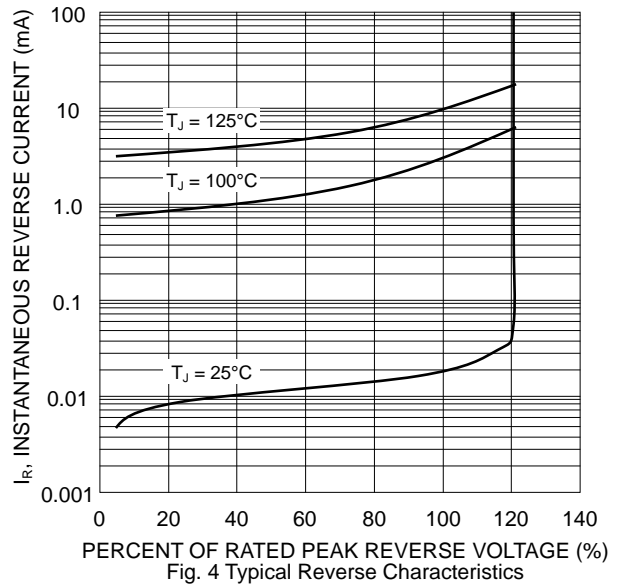


Fig. 4 Typical Reverse Characteristics

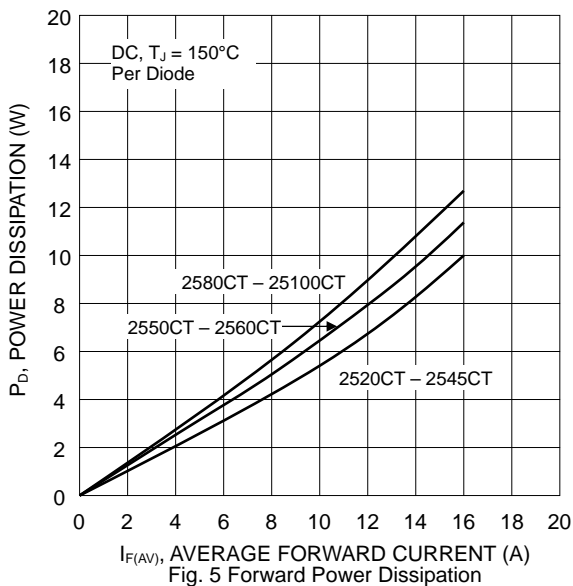


Fig. 5 Forward Power Dissipation

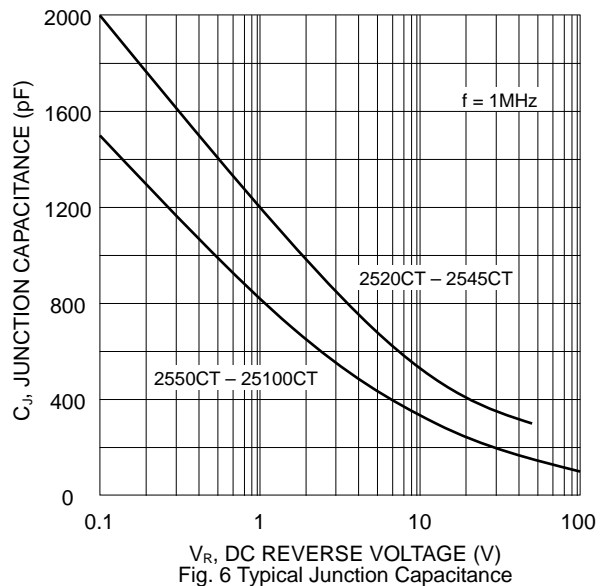
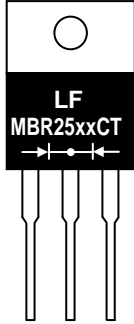


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



LF
MBR25xxCT

MBR25xxCT = Device Number
 xx = 20, 30, 40, 45, 50, 60, 80 or 100
 Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

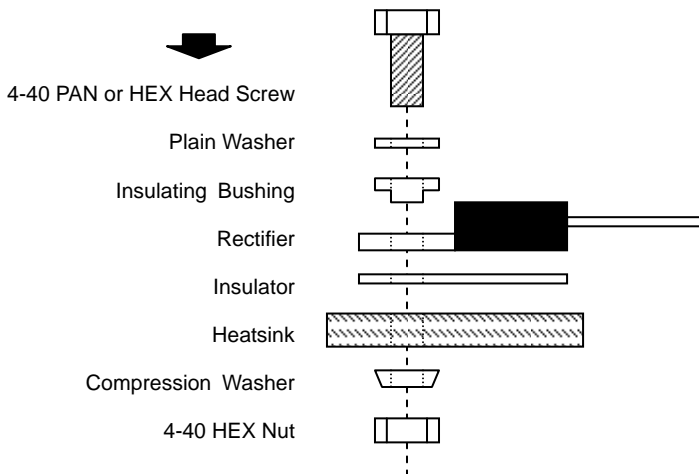
Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	558 x 150 x 40	1,000	570 x 235 x 170	5,000	11.85

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.



4-40 PAN or HEX Head Screw

Plain Washer

Insulating Bushing

Rectifier

Insulator

Heatsink

Compression Washer

4-40 HEX Nut