

MBR540 SERIES

SCHOTTKY BARRIER RECTIFIERS

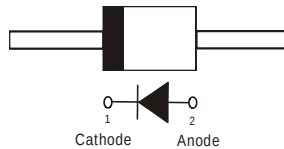
VOLTAGE 40 to 200 Volt **CURRENT** 5 Ampere

FEATURES

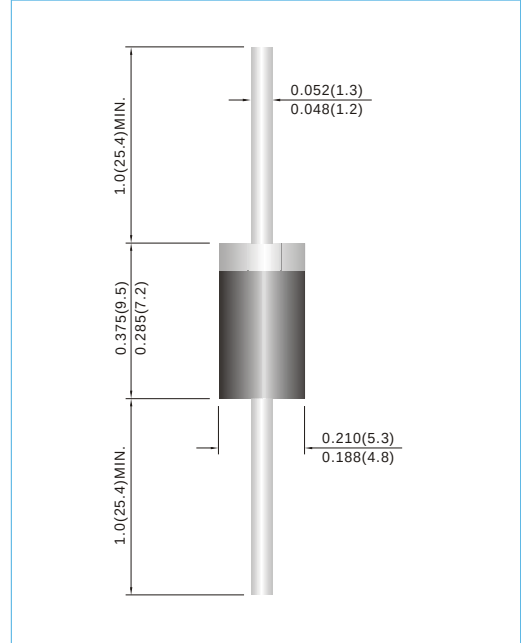
- Epitaxial Construction
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 150A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Lead free in compliance with EU RoHS 2011/65/EU directive

MECHANICAL DATA

- Case: DO-201AD Molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Weight: 0.0402 ounces, 1.142 grams



DO-201AD Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

PARAMETER		SYMBOL	MBR540	MBR545	MBR550	MBR560	MBR580	MBR590	MBR5100	MBR5150	MBR5200	UNIT
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage		V _{RMS}	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage		V _{DC}	40	45	50	60	80	90	100	150	200	V
Average Rectified Output Current (See Figure 1)		I _{F(AV)}	5									A
Non-Repetitive Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	150									A
Power Dissipation		P _D	2.5									W
Forward Voltage at 5A (Notes 3)		V _F	0.7		0.74		0.8			0.9		V
Maximum DC Reverse Current at Rated DC Blocking Voltage (Notes 4)	T _J =25°C	I _R	0.05									mA
	T _J =100°C		10			-						mA
	T _J =125°C		-			5			1			mA
Typical Thermal Resistance (Notes 2) (Notes 1) (Notes 1)		R _{θJA} R _{θJL} R _{θJC}	50 15 12									°C / W
Typical Junction Capacitance (V _R =4V,f=1MHz)		C _J	250				150					pF
Operating Junction and Storage Temperature Range		T _J , T _{STG}	-55 to +150	-65 to +150								°C

NOTES :

1. Measured at ambient temperature at a distance of 9.5mm from the case
2. Minimum Pad Area
3. Pulse test : 300μs pulse width, 1% duty cycle
4. Short duration pulse test used to minimize self-heating effect.

MBR540 SERIES

TYPICAL CHARACTERISTIC CURVES

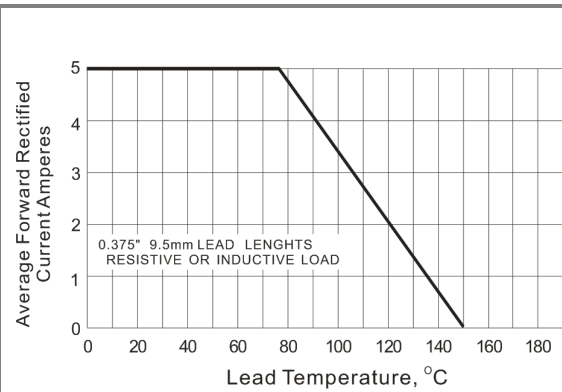


Fig.1 Forward Current Derating Curve

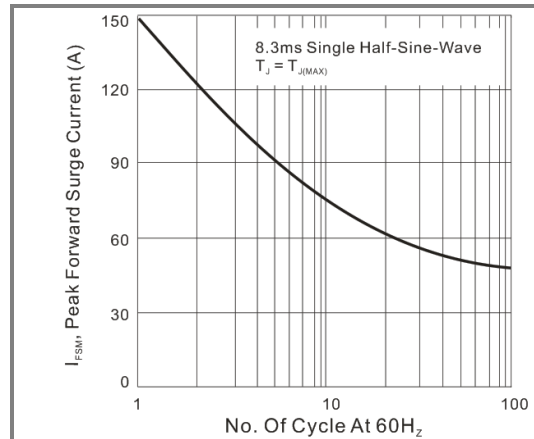


Fig. 2 Maximum Non-Repetitive Surge Current

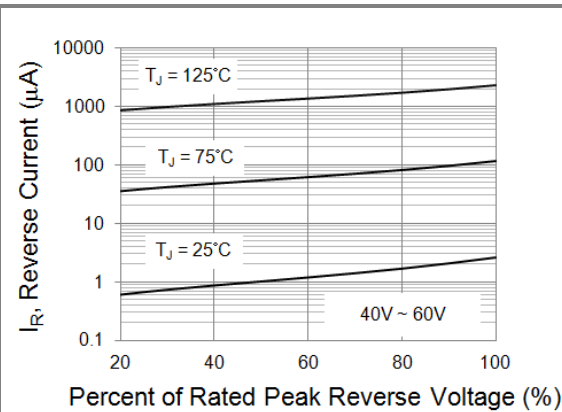


Fig.3 Typical Reverse Characteristics

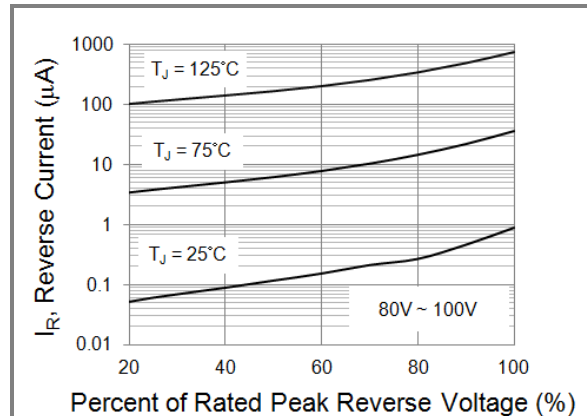


Fig.4 Typical Reverse Characteristics

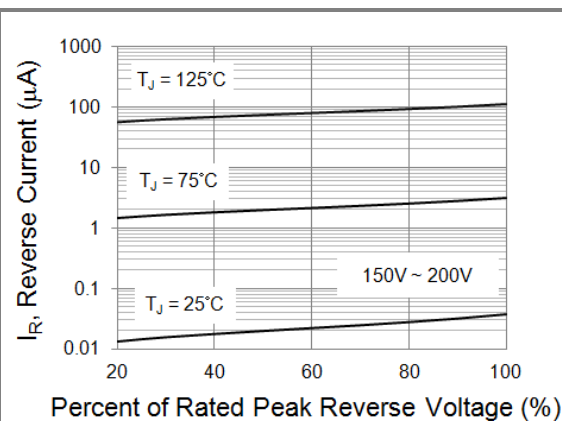


Fig.5 Typical Reverse Characteristics

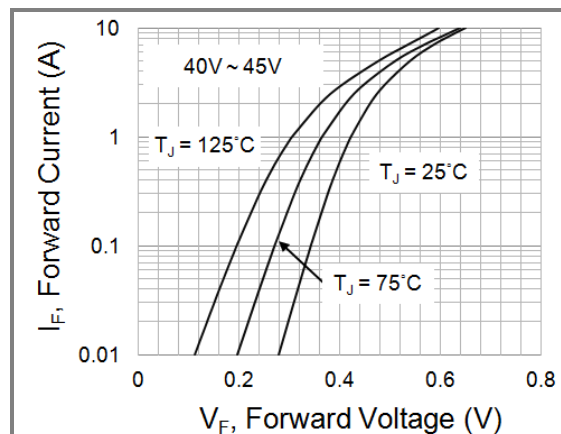


Fig.6 Typical Forward Characteristics

MBR540 SERIES

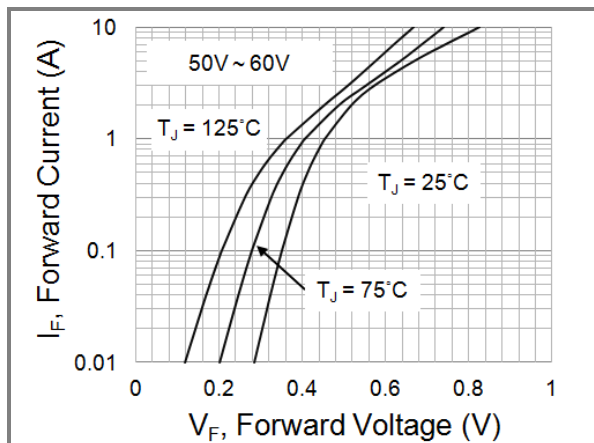


Fig.7 Typical Forward Characteristics

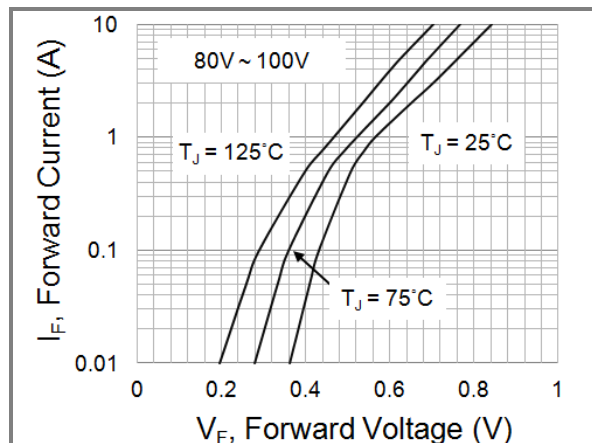


Fig.8 Typical Forward Characteristics

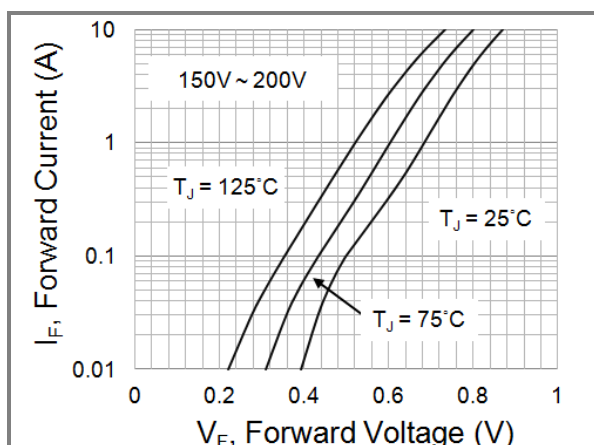


Fig.9 Typical Forward Characteristics

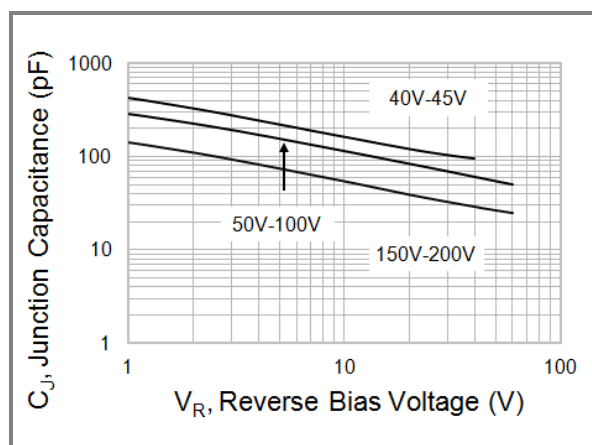


Fig.10 Typical Junction Capacitance

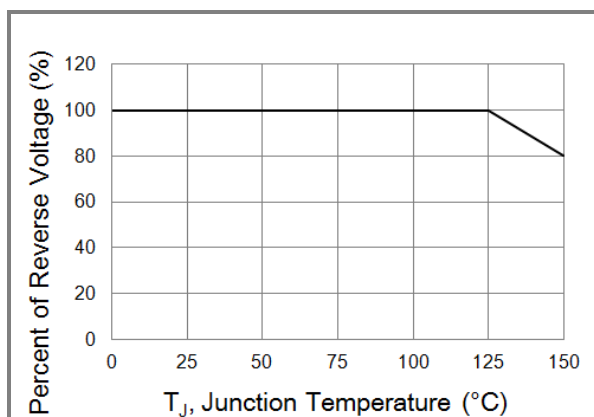


Fig.11 Operating Temperature Derating Curve

MBR540 SERIES

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR5xxx	DO-201AD	1250pcs / Ammo	MBR5xxx
MBR5xxx	DO-201AD	500pcs / Box	MBR5xxx
MBR5xxx	DO-201AD	1250pcs / 13" reel	MBR5xxx

MBR540 SERIES

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from PANJIT International Inc..
- PANJIT International Inc. reserves the rights to make changes of the content herein the document follow PCN procedure. Please refer to our website for the latest document.
- PANJIT International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- PANJIT International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. PANJIT International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed or authorized for equipment relating to human life, life-saving or life-sustaining applications, such as medical instruments, transportation equipment, aerospace machinery, or for other applications intended to cause personal injury. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify PANJIT International Inc. for any damages resulting from such improper use or sale. For additional terms and conditions regarding the use of PANJIT products, please refer to the Terms of Use available on the PANJIT website.
- Since PANJIT uses lot number as the tracking base, please provide the lot number for tracking when complaining.