



MBR540 SERIES

SCHOTTKY BARRIER RECTIFIERS

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

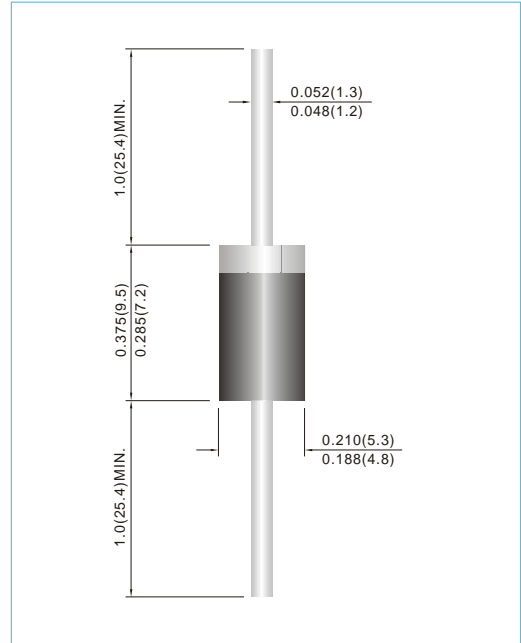
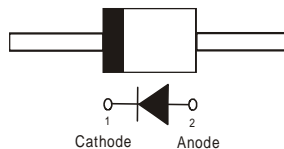
DO-201AD Unit : inch(mm)

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



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	UNITS	
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)	$T_j=25^{\circ}C$	0.05									mA	
	$T_j=100^{\circ}C$	10				-					mA	
	$T_j=125^{\circ}C$	-			5		1		mA			
Typical Thermal Resistance (Notes 2) (Notes 1) (Notes 1)	$R_{\theta JA}$	50										°C / W
	$R_{\theta JL}$	15										
	$R_{\theta JC}$	12										
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

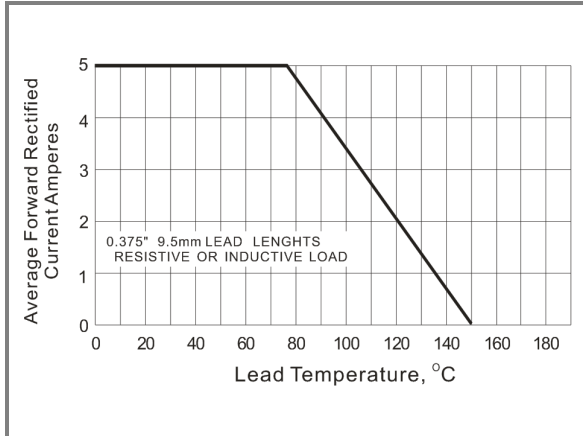


Fig.1 Forward Current Derating Curve

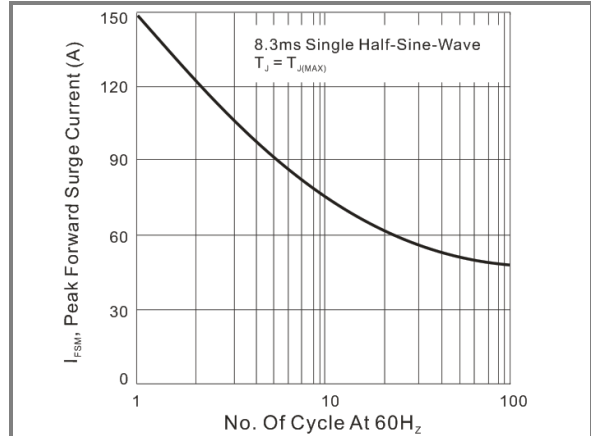


Fig. 2 Maximum Non-Repetitive Surge Current

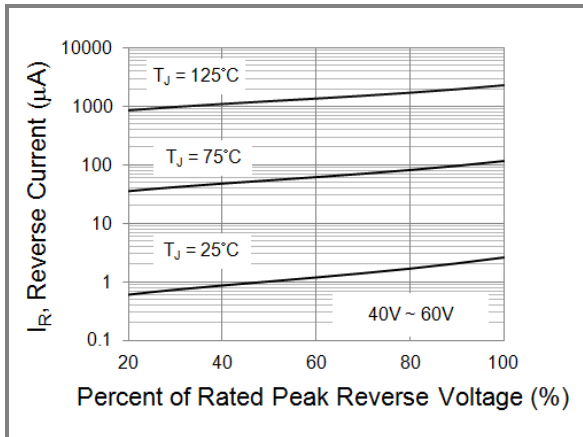


Fig.3 Typical Reverse Characteristics

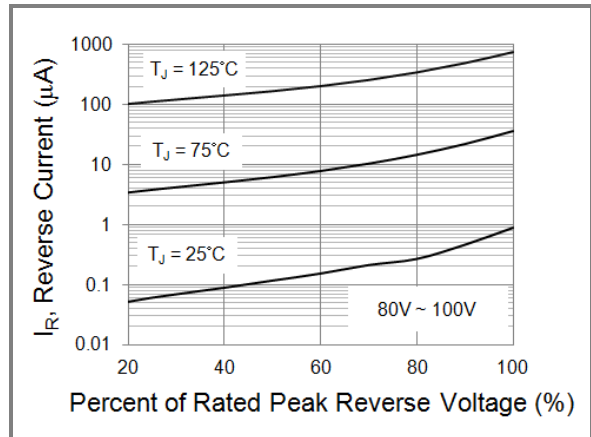


Fig.4 Typical Reverse Characteristics

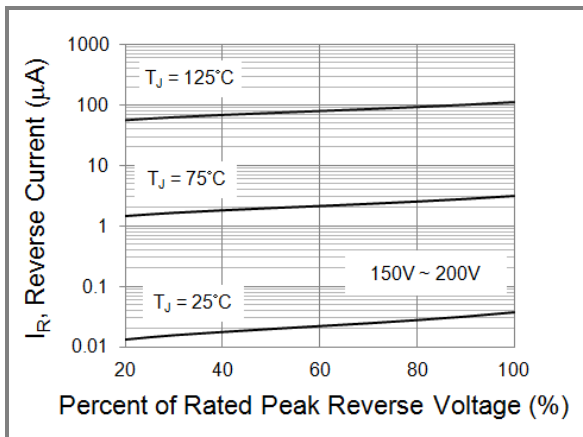


Fig.5 Typical Reverse Characteristics

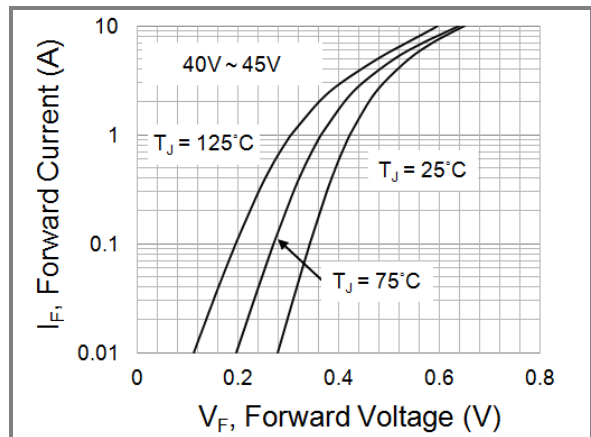


Fig.6 Typical Forward Characteristics



MBR540 SERIES

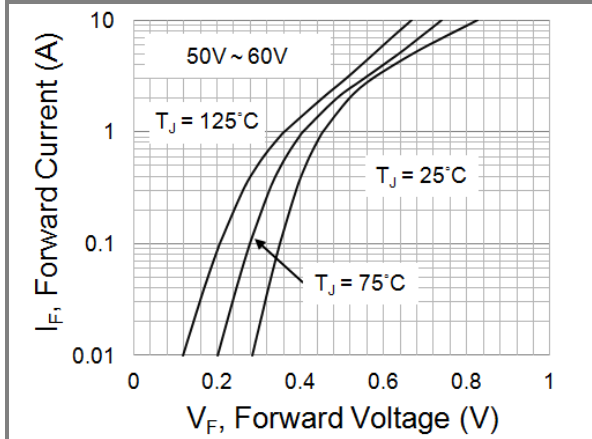


Fig.7 Typical Forward Characteristics

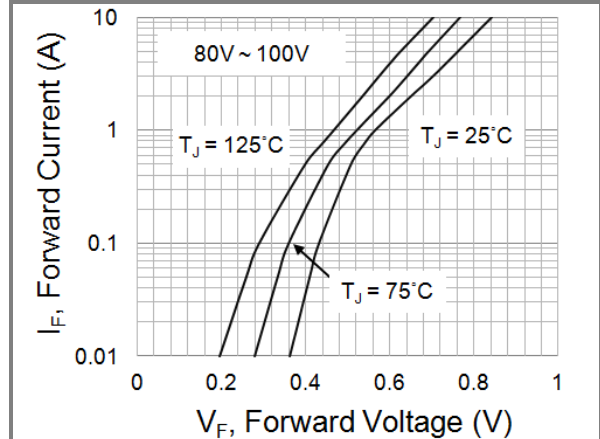


Fig.8 Typical Forward Characteristics

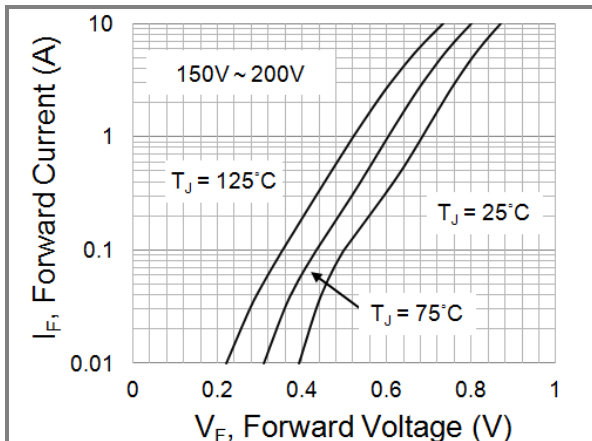


Fig.9 Typical Forward Characteristics

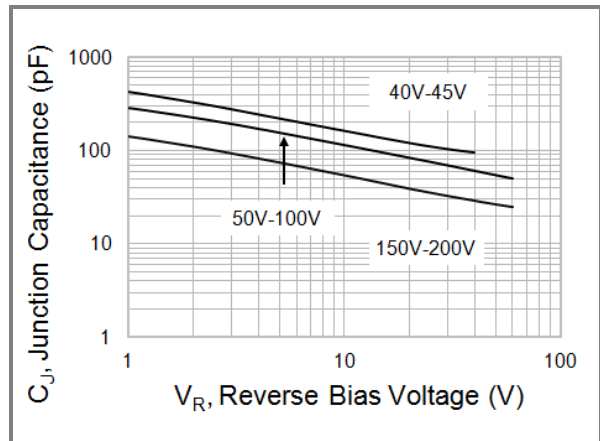


Fig.10 Typical Junction Capacitance

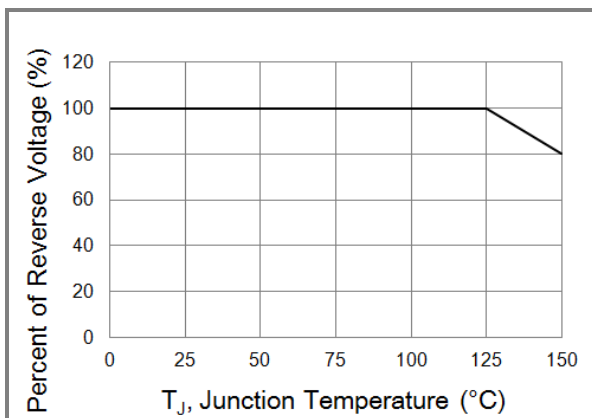


Fig.11 Operating Temperature Derating Curve



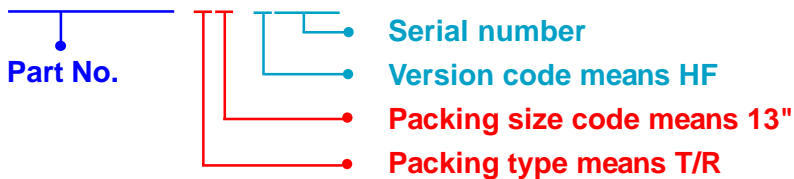
MBR540 SERIES

Part No_packing code_Version

MBR540_AY_00001
 MBR540_AY_10001
 MBR540_B0_00001
 MBR540_B0_10001
 MBR540_R2_00001
 MBR540_R2_10001

For example :

RB500V-40 **R2** **00001**



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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 anytime without notification. 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 and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. 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.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.