

MBR540 SERIES

SCHOTTKY BARRIER RECTIFIERS

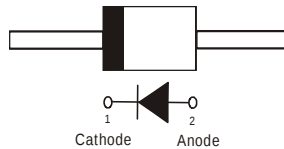
VOLTAGE 40 to 200 Volt **CURRENT** 5 Ampere

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

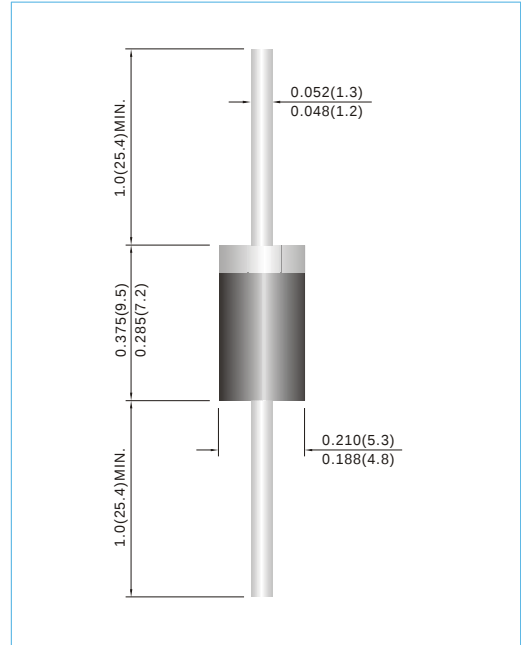
MECHANICAL DATA

- 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	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°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.

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TYPICAL CHARACTERISTIC CURVES

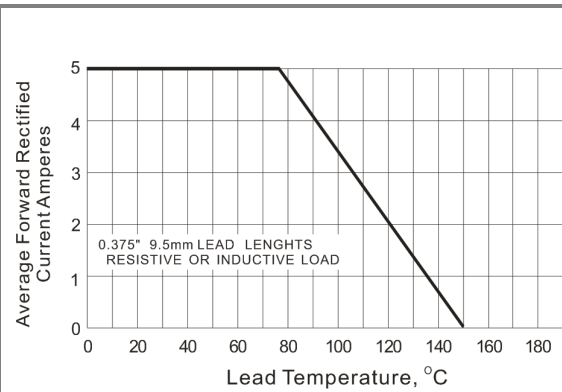


Fig.1 Forward Current Derating Curve

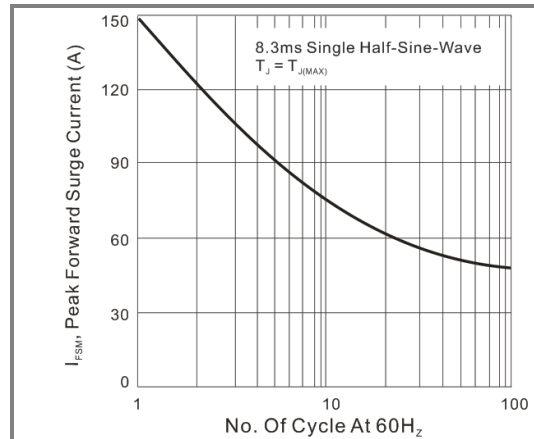


Fig. 2 Maximum Non-Repetitive Surge Current

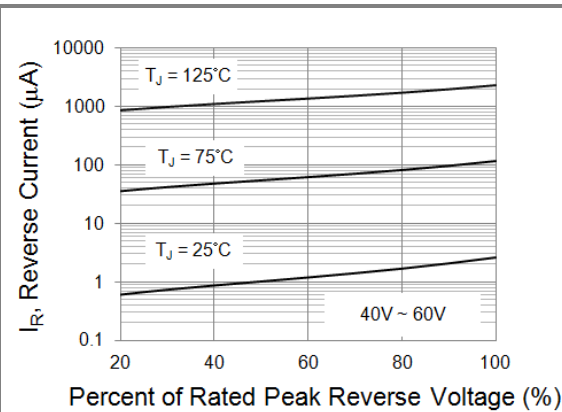


Fig.3 Typical Reverse Characteristics

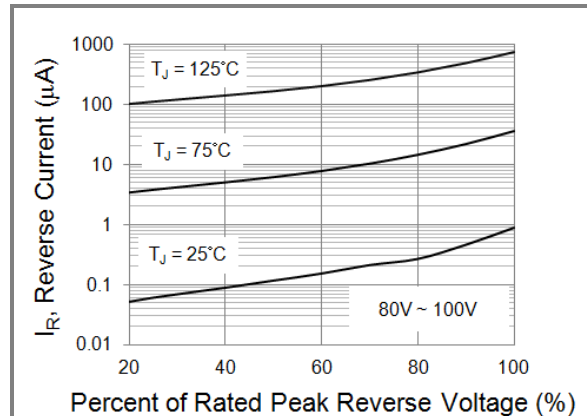


Fig.4 Typical Reverse Characteristics

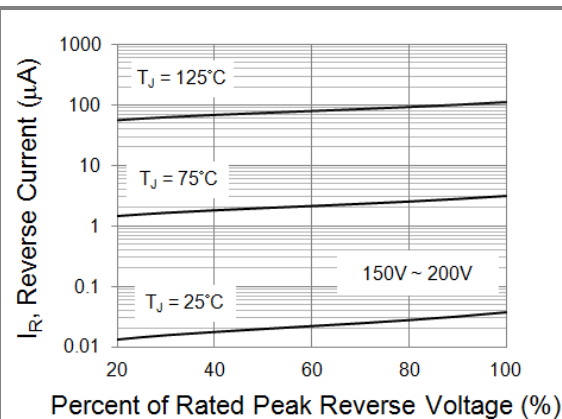


Fig.5 Typical Reverse Characteristics

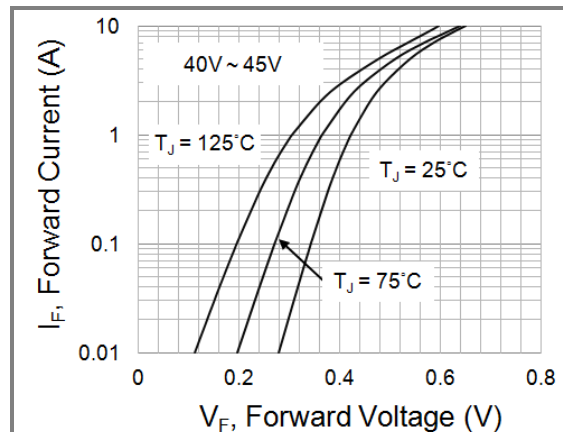


Fig.6 Typical Forward Characteristics

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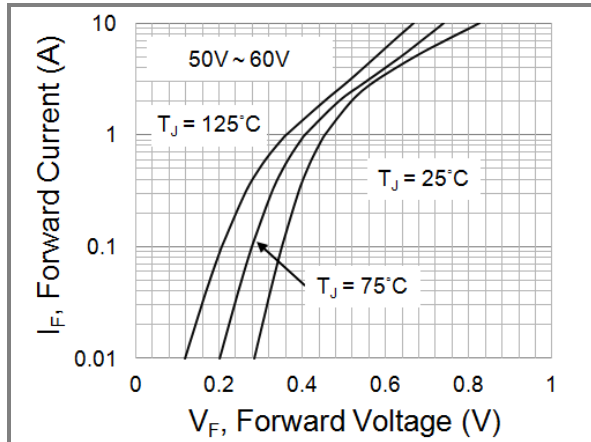


Fig.7 Typical Forward Characteristics

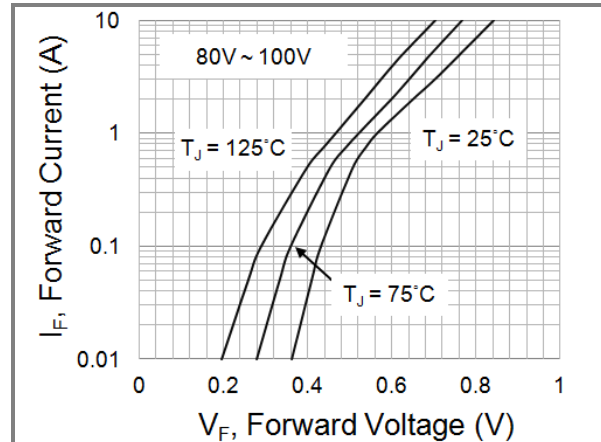


Fig.8 Typical Forward Characteristics

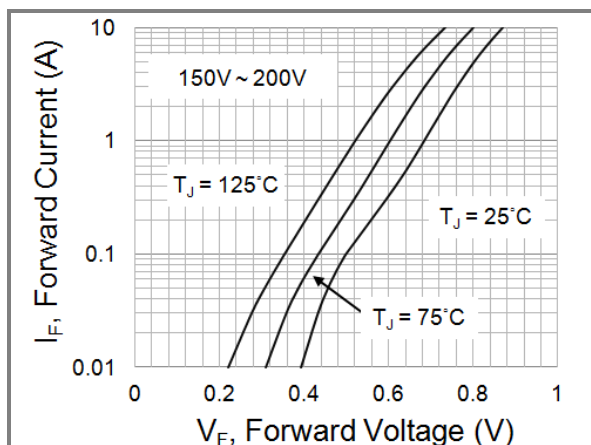


Fig.9 Typical Forward Characteristics

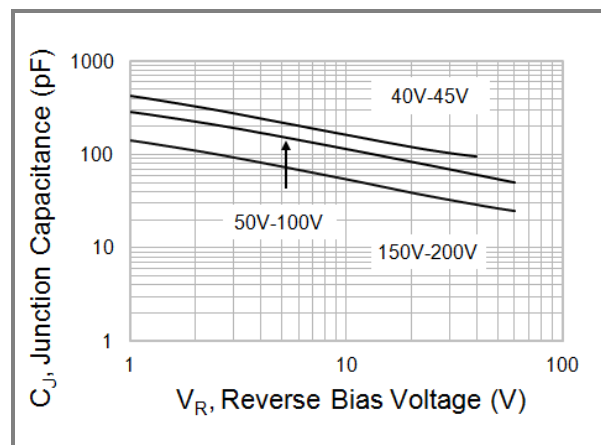


Fig.10 Typical Junction Capacitance

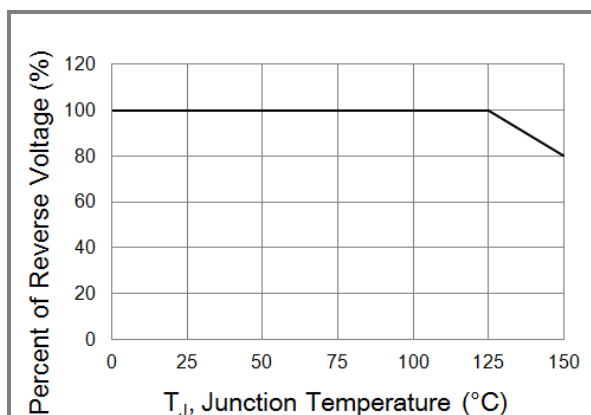


Fig.11 Operating Temperature Derating Curve

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

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

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			



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