

# MBRS540

**SURFACE MOUNT REVERSE VOLTAGE - 40 Volts**

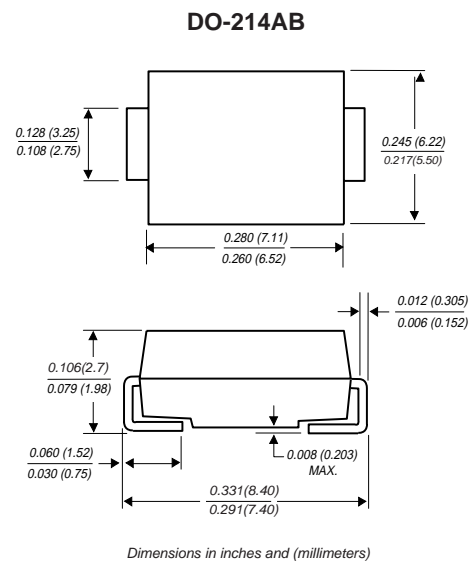
**SCHOTTKY BARRIER RECTIFIERS FORWARD CURRENT - 5.0 Amperes**

## FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case: Molded Plastic
- Polarity: Color band denotes cathode
- Weight: 0.22 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

CHARACTERISTICS	SYMBOL	MBRS540	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths	I <sub>(AV)</sub>	5.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	100	A
Maximum Forward Voltage at 5.0A DC	V <sub>F</sub>	0.55	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	0.2 20	mA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	500	pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	15	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

NOTES: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

2. Thermal resistance junction to ambient,

## RATING AND CHARACTERISTIC CURVES MBR540

FIG. 1 – FORWARD CURRENT DERATING CURVE

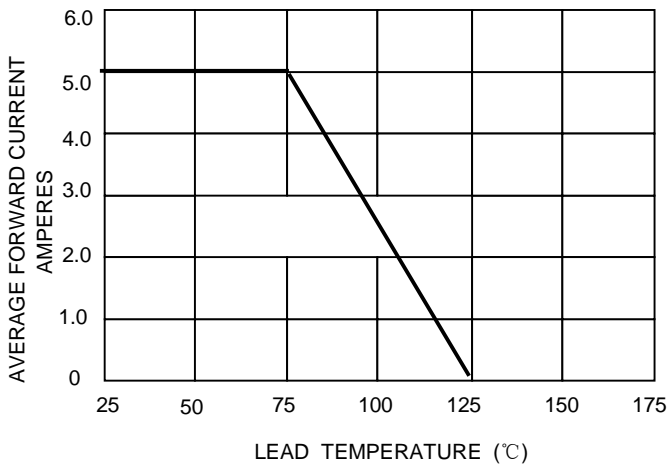


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

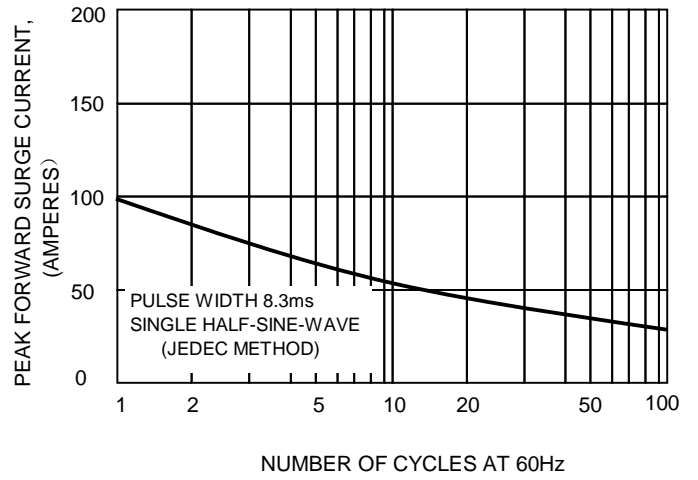


FIG.3 – TYPICAL JUNCTION CAPACITANCE

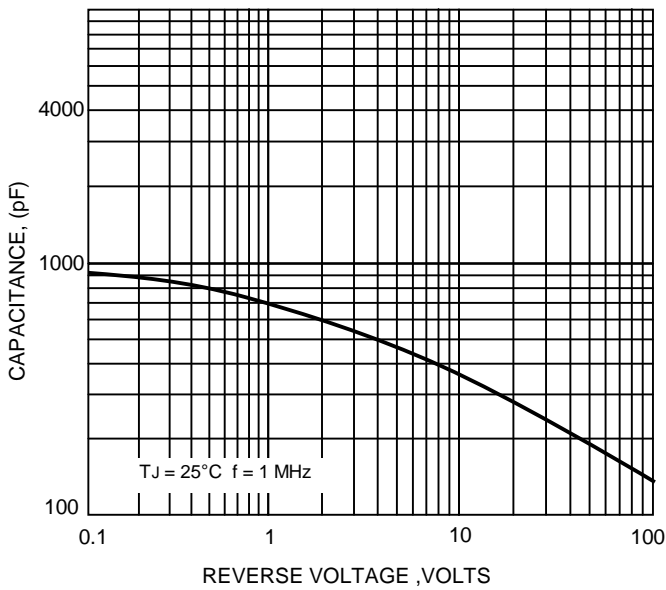


FIG.4-TYPICAL FORWARD CHARACTERISTICS

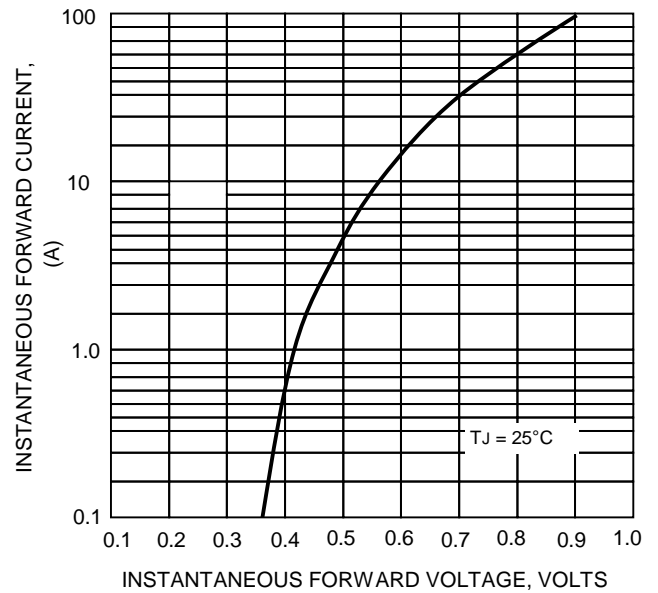


FIG.2-TYPICAL REVER CHARACTERISTICS

