

# Schottky Diode

## **MBR1650**

50V / 16A

# DATASHEET

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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

**NEW PRODUCT**

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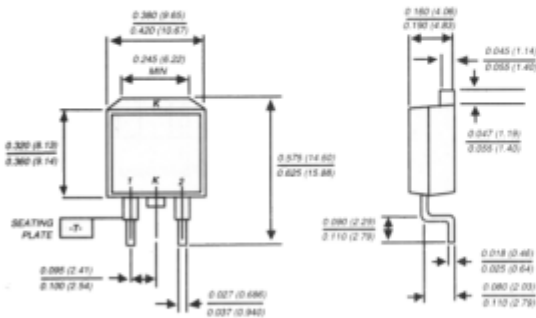
**NEW PRODUCT**

# MBRB1635 THRU MBRB1660

## SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 16.0 Amperes

### TO-263AB



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering in accordance with CECC 802 / Reflow guaranteed



### MECHANICAL DATA

**Case:** JEDEC TO-263AB molded plastic body

**Terminals:** Lead solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Weight:** 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBRB1635	MBRB1645	MBRB1650	MBRB1660	UNITS
Maximum repetitive peak reverse voltage	VRRM	35	45	50	60	Volts
Maximum working peak reverse voltage	VRWM	35	45	50	60	Volts
Maximum DC blocking voltage	VDC	35	45	50	60	Volts
Maximum average forward rectified current at T <sub>C</sub> =125°C	I(AV)	16.0				Amps
Peak repetitive forward current at T <sub>C</sub> =125°C (rated V <sub>R</sub> , sq. wave, 20 KHz)	IFRM	32.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	I <sub>RRM</sub>	1.0		0.5		Amps
Maximum instantaneous forward voltage at: (NOTE 2) I <sub>F</sub> =16A, T <sub>C</sub> =25°C I <sub>F</sub> =16A, T <sub>C</sub> =125°C	V <sub>F</sub>	0.63 0.57		0.75 0.65		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 2) T <sub>C</sub> = 25°C T <sub>C</sub> =125°C	I <sub>R</sub>	0.2 40.0		1.0 50.0		mA
Voltage rate of change (rated V <sub>R</sub> )	dv/dt	10,000				V/μs
Maximum typical thermal resistance (NOTE 3)	R <sub>θJC</sub>	1.5				°C/W
Operating junction temperature range	T <sub>J</sub>	-65 to +150				°C
Storage temperature range	T <sub>STG</sub>	-65 to +175				°C

**NOTES:** (1) 2.0μs pulse width, f=1.0 KHz  
(2) Pulse test: 300μs pulse width, 1% duty cycle  
(3) Thermal resistance from junction to case

**RATINGS AND CHARACTERISTIC CURVES MBRB1635 THRU MBRB1660**

