

Schottky Diode

MBR745

45V / 7,5A

DATASHEET

from

www.web-bcs.com

OEM – General Semiconductor

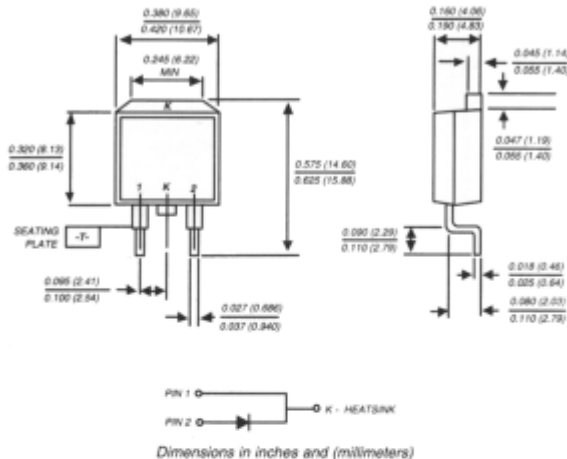
Source: General Semiconductor Databook 1998

MBRB735 THRU MBRB760

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 7.5 Amperes

TO-263AB



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
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ 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 ounces, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBRB735	MBRB745	MBRB750	MBRB760	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	Volts
Maximum working peak reverse voltage	V_{RWM}	35	45	50	60	Volts
Maximum DC blocking voltage	V_{DC}	35	45	50	60	Volts
Maximum average forward rectified current (SEE FIG 1)	$I_{(AV)}$	7.5				Amps
Peak repetitive forward current (square wave, 20 KHz) at $T_C=105^\circ\text{C}$	I_{FRM}	15.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	I_{RRM}	1.0		0.5		Amps
Maximum instantaneous forward voltage at (NOTE 2)	V_F	-		0.75		Volts
		0.57		0.65		
		0.84		-		
		0.72		-		
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1)	I_R	0.1		0.5		mA
		15.0		50.0		
Voltage rate of change (rated V_R)	dv/dt	10,000		1,000		V/ μs
Maximum thermal resistance, (NOTE 3)	$R_{\theta JC}$	3.0				$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-65 to +150				$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +175				$^\circ\text{C}$

NOTES:

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

RATINGS AND CHARACTERISTIC CURVES MBRB735 THRU MBRB760

