



Schottky Barrier Rectifier

**Reverse Voltage: 20 to 200 Volts**  
**Forward Current: 1.0 Ampere**

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 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
- High temperature soldering guaranteed:  
260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## Mechanical data

- Case: R-1 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.007 ounce, 0.20 gram

## Maximum Ratings And Electrical Characteristics

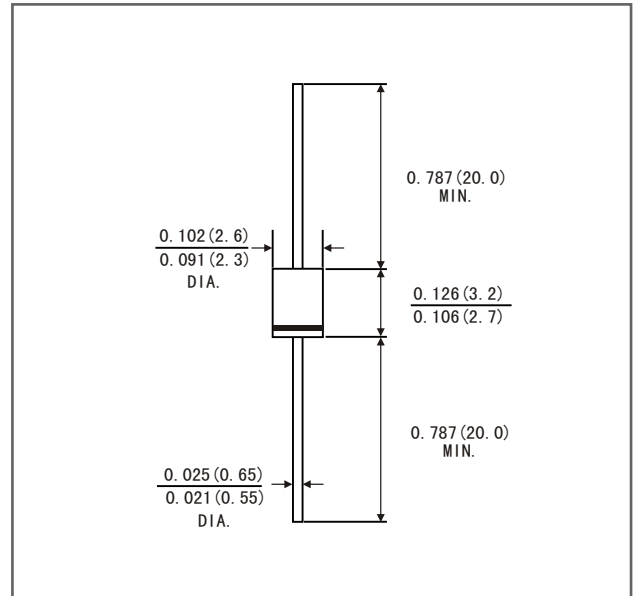
- Ratings at 25°C ambient temperature unless otherwise specified.
- Single phase, half wave, resistive or inductive load.
- For capacitive load derate by 20%.

Type Number	Symbols	MBR 120 TG	MBR 130 TG	MBR 140 TG	MBR 150 TG	MBR 160 TG	MBR 180 TG	MBR 1100 TG	MBR 1150 TG	MBR 1200 TG	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	57	71	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see Fig. 1 )	$I_{(AV)}$	1.0									Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	40.0									Amps
Maximum instantaneous forward voltage at 1.0 A(Note 1 )	$V_F$	0.55		0.70		0.85		0.90		0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$I_R$	0.2									mA
		10									
Typical junction capacitance(Note 3)	$C_J$	110									pF
Typical thermal resistance(Note 2)	$R_{\theta JA}$	50.0									°C/W
Operating junction temperature range	$T_J$	-65 to +150									°C
Storage temperature range	$T_{STG}$	-65 to +150									°C

Notes: 1.Pulse test: 300  $\mu$ s pulse width,1% duty cycle  
 2.Thermal resistance (from junction to ambient)Vertical P.C.B. mounted , 0.5"(12.7mm)lead length  
 3.Measured at 1.0MHz and reverse voltage of 4.0 volts

## Package outline

R-1



Dimensions in inches and (millimeters)

## Rating and characteristic curves

FIG.1-FOWARD CURRENT DERATING CURVE

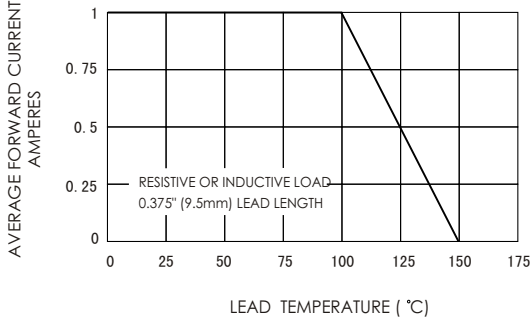


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

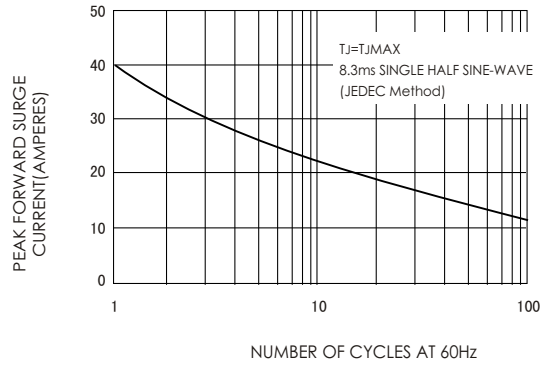


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

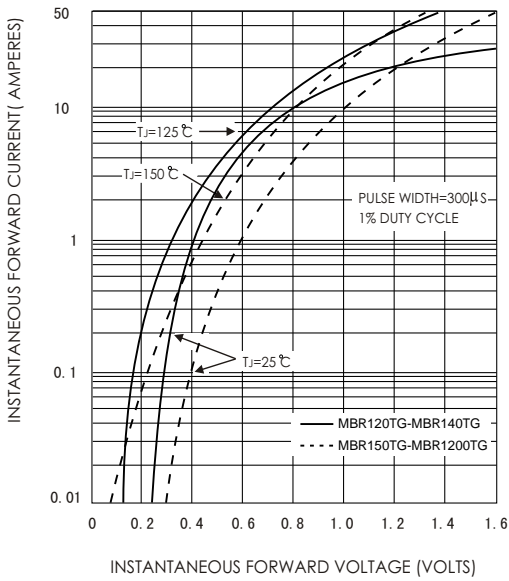


FIG.4-TYPICAL REVERSE CHARACTERISTICS

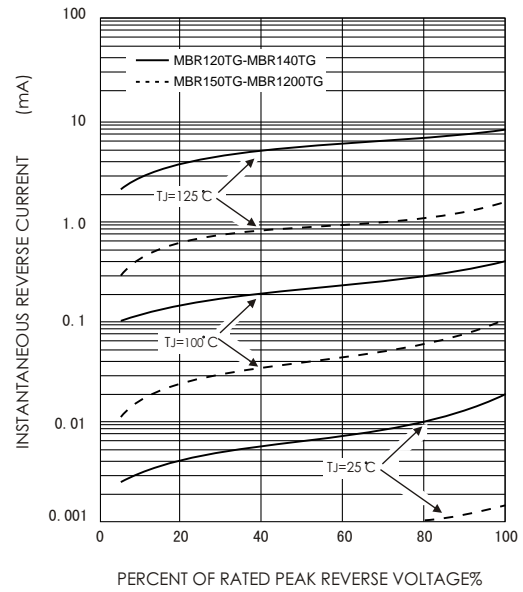


FIG.5-TYPICAL JUNCTION CAPACITANCE

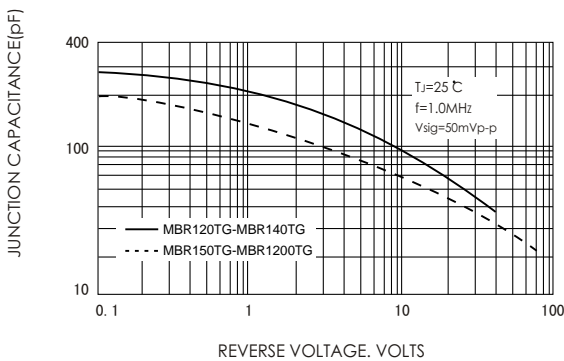


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

