

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 2.24 grams

### VOLTAGE RANGE

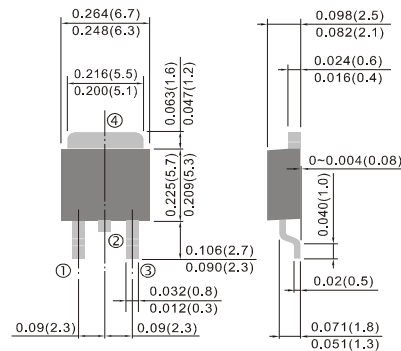
45 to 200 Volts

### CURRENT

20 Ampere



### TO-252



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	MBRD 2045	MBRD 2060	MBRD 20100	MBRD 20150	MBRD 20200	UNITS
Maximum Recurrent Peak Reverse Voltage	45	60	100	150	200	V
Maximum RMS Voltage	32	42	70	105	140	V
Maximum DC Blocking Voltage	45	60	100	150	200	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Tc=100°C	20					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	175					A
Maximum Instantaneous Forward Voltage at 20A	0.55	0.70	0.85	0.90		V
Maximum DC Reverse Current Ta=25°C	0.2		0.05			mA
at Rated DC Blocking Voltage Ta=125°C	35		20			mA
Typical Junction Capacitance (Note1)	500					pF
Typical Thermal Resistance R JA (Note 2)	8					°C/W
Operating Temperature Range Tj	-55 — +150					°C
Storage Temperature Range Tstg	-55 — +150					°C

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

## RATING AND CHARACTERISTIC CURVES (MBRD2045 THRU MBRD20200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

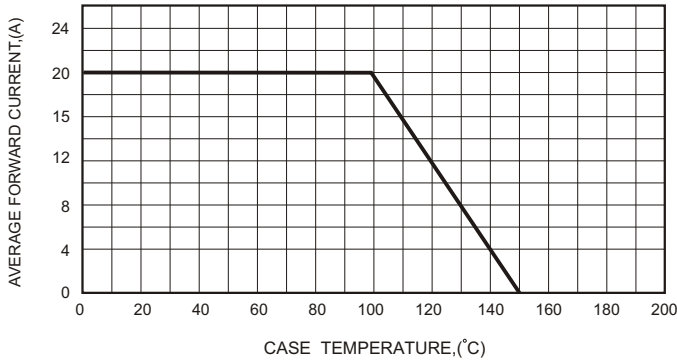


FIG.2-TYPICAL FORWARD CHARACTERISTICS

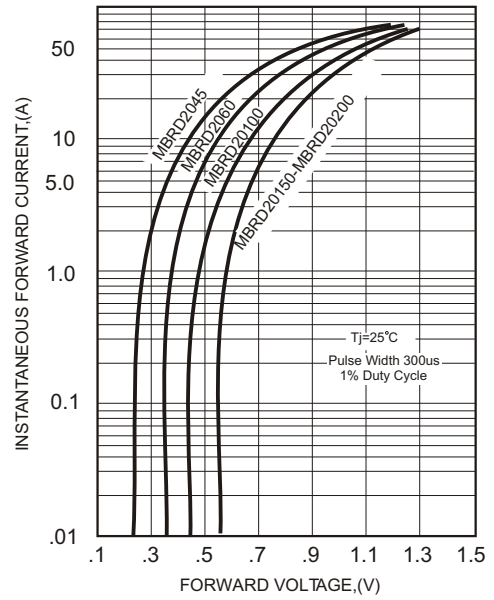


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

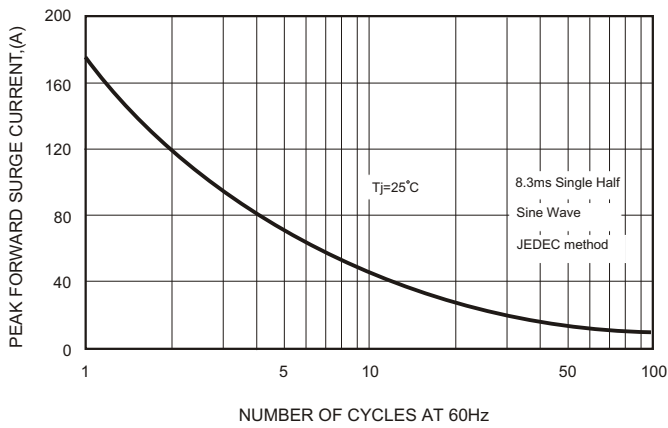


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

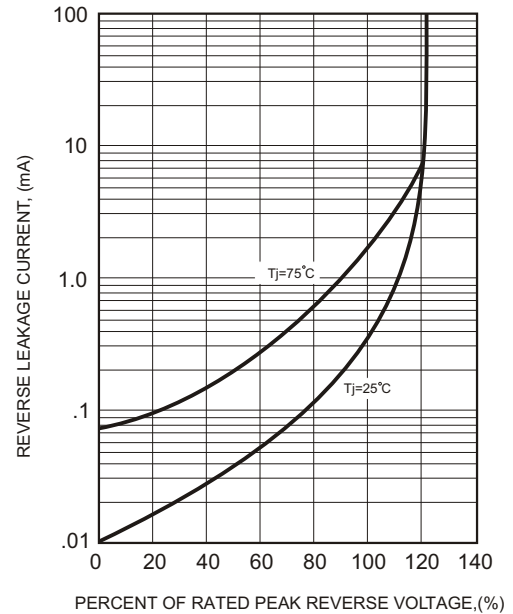


FIG.4-TYPICAL JUNCTION CAPACITANCE

