

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 guaranteed
- * Polarity: As Marked
- * Mounting position: Any
- * Weight: 2.24 grams

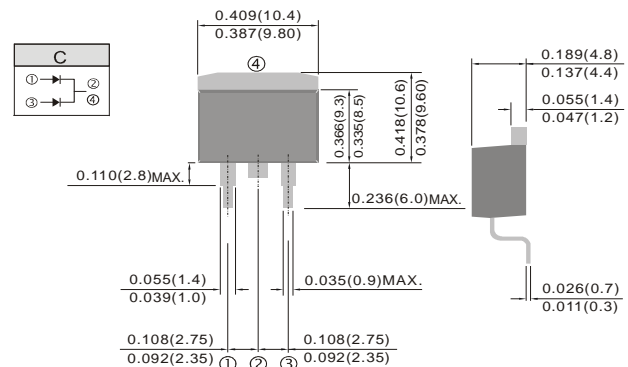
VOLTAGE RANGE

45 to 100 Volts

CURRENT

30 Ampere

TO-263 / D²PAK



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MBRS 3045	MBRS 3060	MBRS 30100	MBRS 30150	MBRS 30200	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	30					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	200					A
Maximum Instantaneous Forward Voltage at 30A	0.55	0.75	0.85	0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	0.1		0.02			mA
	5		2			
Typical Junction Capacitance (Note1)	1000					pF
Typical Thermal Resistance R _{JA} (Note 2)	3.5					°C/W
Operating Temperature Range T _J	-55 — +150					°C
Storage Temperature Range T _{STG}	-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 (MBRS3045 THRU MBRS30200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

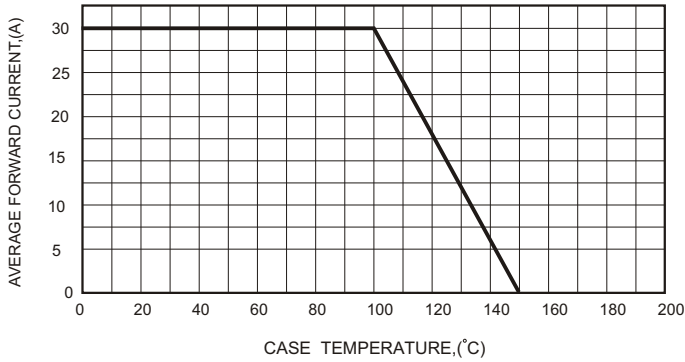


FIG.2-TYPICAL FORWARD CHARACTERISTICS

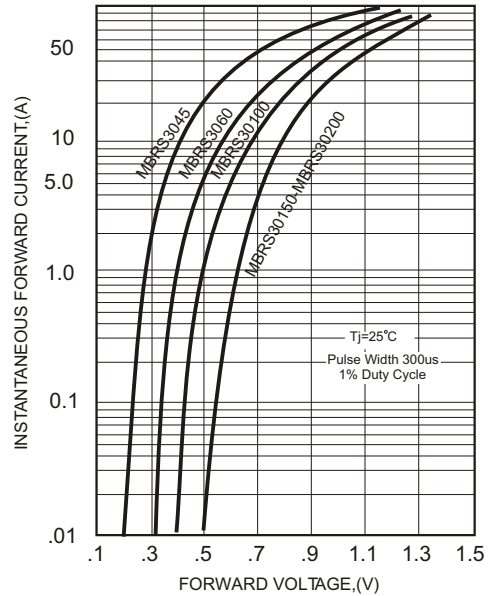


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

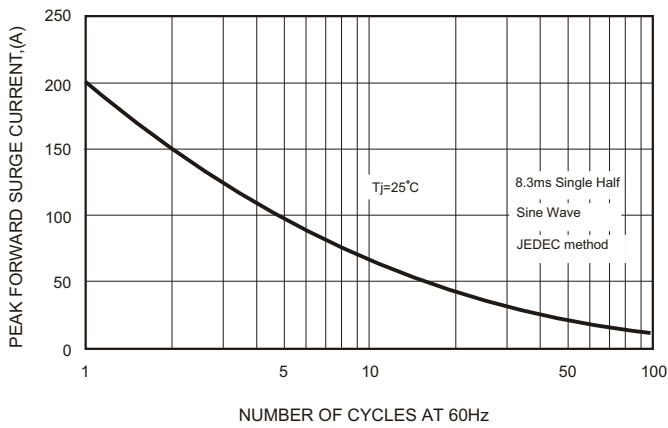


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

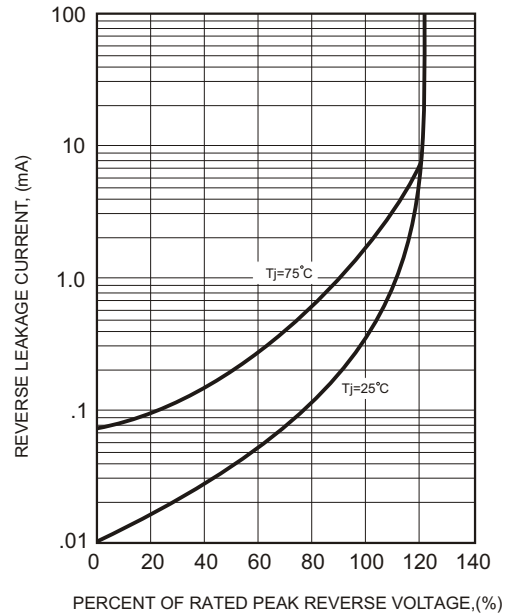
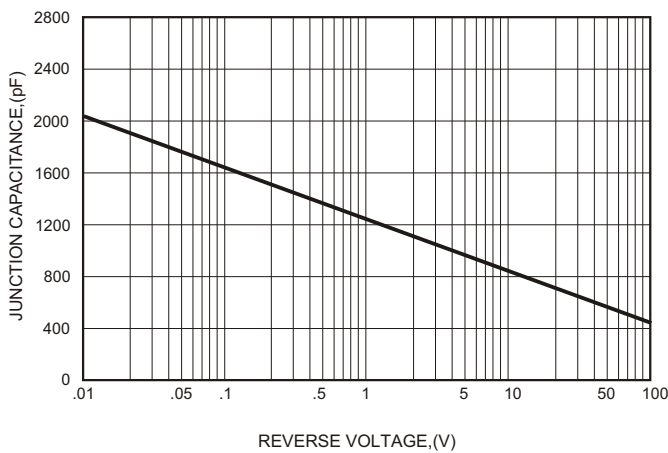


FIG.4-TYPICAL JUNCTION CAPACITANCE



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