

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

VOLTAGE RANGE

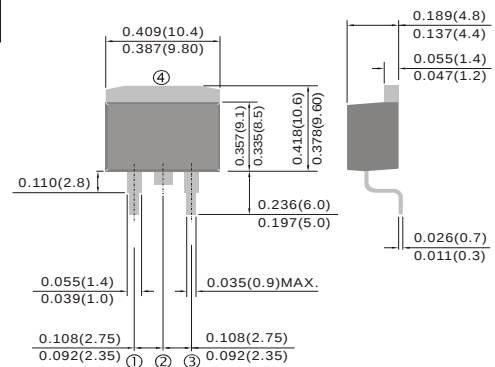
45 Volts

CURRENT

30.0 Amperes



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	MBR30L45	UNITS
Maximum Recurrent Peak Reverse Voltage	45	V
Maximum RMS Voltage	45	V
Maximum DC Blocking Voltage	32	V
Maximum Average Forward Rectified Current		
at T _c =125°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	0.5	V
Maximum DC Reverse Current Ta=25°C	0.2	mA
at Rated DC Blocking Voltage Ta=100°C	50	mA
Typical Junction Capacitance (Note1)	500	pF
Typical Thermal Resistance RθJC (Note 2)	2.5	°C/W
Operating Temperature Range T _J	-65 — +150	°C
Storage Temperature Range T _{STG}	-65 — +150	°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES (MBR30L45)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

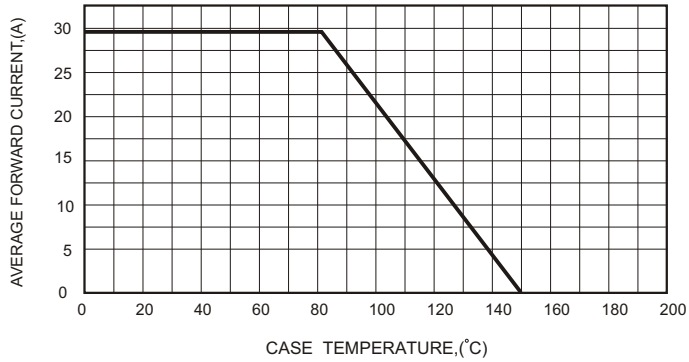


FIG.2-TYPICAL FORWARD CHARACTERISTICS

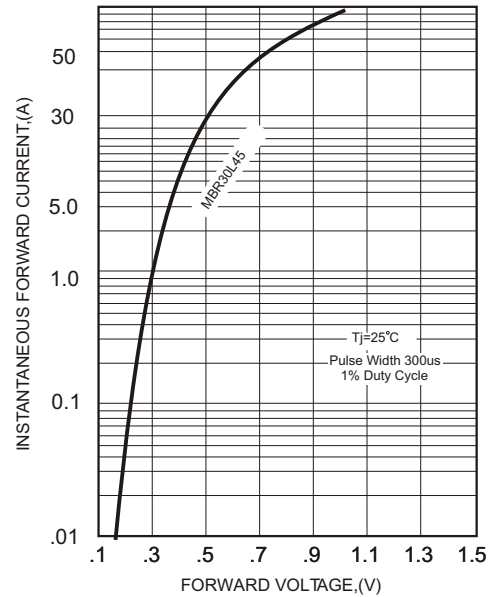


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

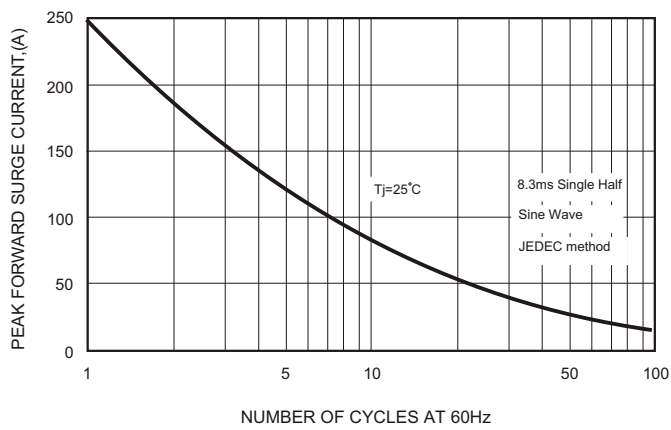


FIG.4-TYPICAL JUNCTION CAPACITANCE

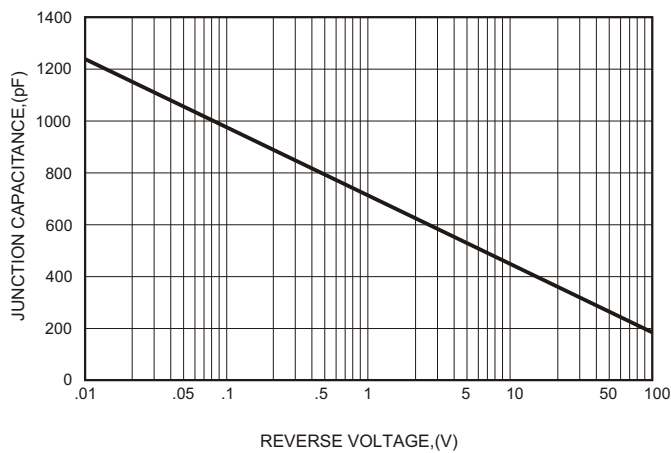


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

