

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V
CURRENT: 16 A

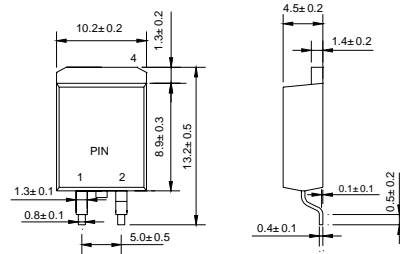
FEATURES

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ Guard ring for over voltage protection.

MECHANICAL DATA

- ◇ Case: JEDEC D²PAK, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.087 ounces, 2.2 gram

D²PAK



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBRB 1630	MBRB 1635	MBRB 1640	MBRB 1645	MBRB 1650	MBRB 1660	MBRB 1690	MBRB 16100	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	30	35	40	45	50	60	90	100	V
Maximum RMS Voltage	V _{RMS}	21	25	28	32	35	42	63	70	V
Maximum DC blocking voltage	V _{DC}	30	35	40	45	50	60	90	100	V
Maximum average forward total device rectified current @T _c = 125°C	I _{F(AV)}	16								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150								A
Maximum forward voltage (I _F =16A, T _c =25°C) (Note 1) (I _F =16A, T _c =125°C)	V _F	0.63			0.75		0.85			V
		0.57			0.65		-			
Maximum reverse current @T _c =25°C at rated DC blocking voltage @T _c =125°C	I _R	0.2			1.0					m A
		40			50					
Maximum thermal resistance (Note2)	R _{θJC}	1.5								°C/W
Operating junction temperature range	T _J	- 55 ---- + 150								°C
Storage temperature range	T _{STG}	- 55 ---- + 175								°C

NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.

2. Thermal resistance from junction to case.

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FIG.1 – FORWARD CURRENT DERATING CURVE

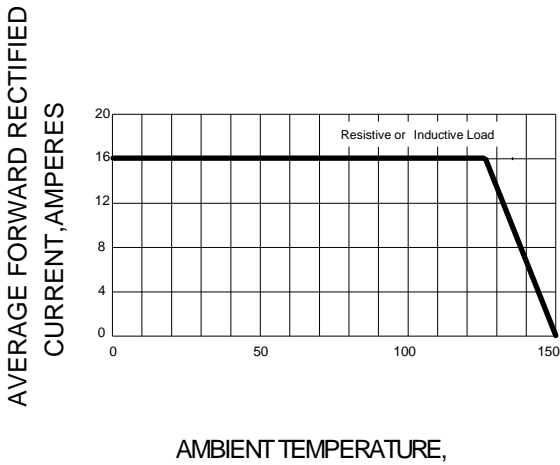


FIG.2 –MAXIMUM NON-REPETTIVE FORWARD SURGE CURRENT

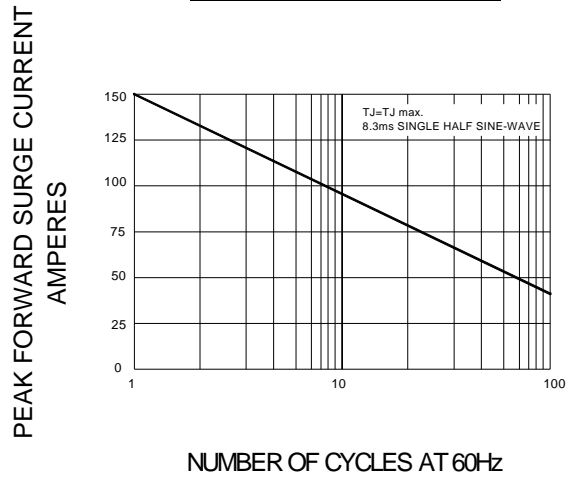


FIG.3 –TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

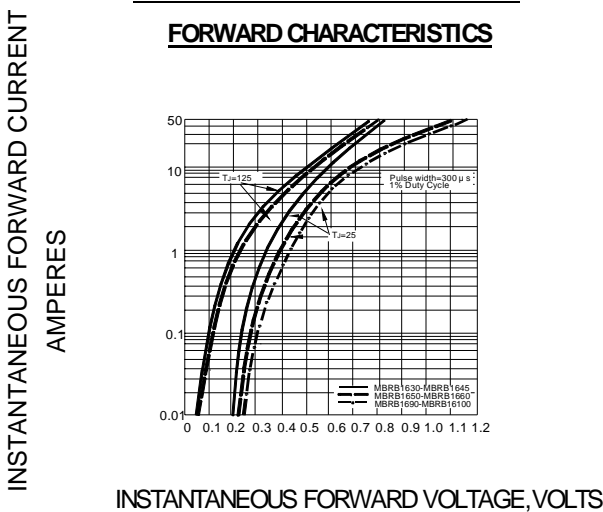


FIG.4-TYPICAL REVERSE CHARACTERISTICS

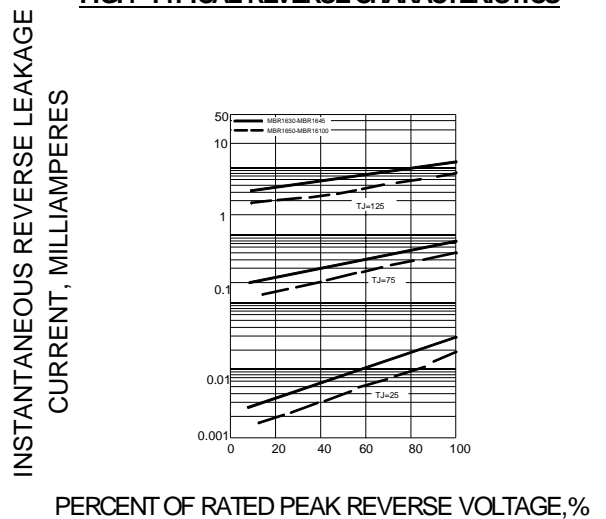


FIG.5-TYPICAL JUNCTION CAPACITANCE

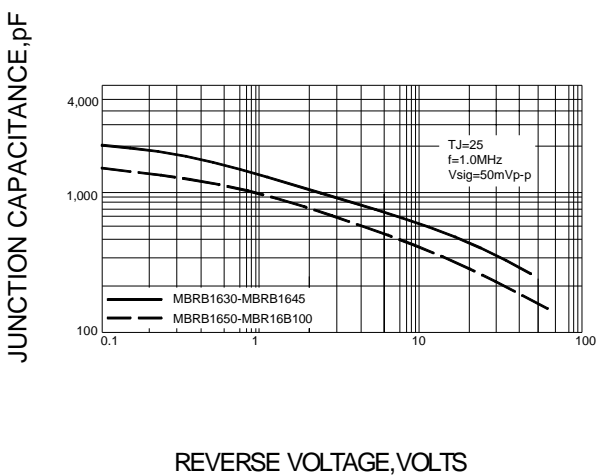


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

