

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 100 V
CURRENT: 10 A

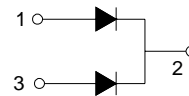
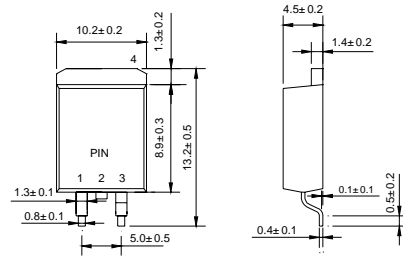
FEATURES

- ◇ 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 grams

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 1030	MBRB 1035	MBRB 1040	MBRB 1045	MBRB 1050	MBRB 1060	MBRB 1090	MBRB 10100	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 @ $T_c = 133^\circ\text{C}$	$I_{F(AV)}$	10								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150								A
Maximum forward voltage ($I_F=10\text{A}, T_c=25^\circ\text{C}$) ($I_F=10\text{A}, T_c=125^\circ\text{C}$) (Note 1) ($I_F=20\text{A}, T_c=25^\circ\text{C}$) ($I_F=20\text{A}, T_c=125^\circ\text{C}$)	V_F	-	0.57			0.80	0.70	0.80	0.65	V
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=125^\circ\text{C}$	I_R	0.1						15	6.0 ³⁾	m A
Maximum thermal resistance (Note2)	$R_{\theta JC}$	2.2								°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.

3. $T_c=100^\circ\text{C}$

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FIG.1 – PEAK FORWARD SURGE CURRENT

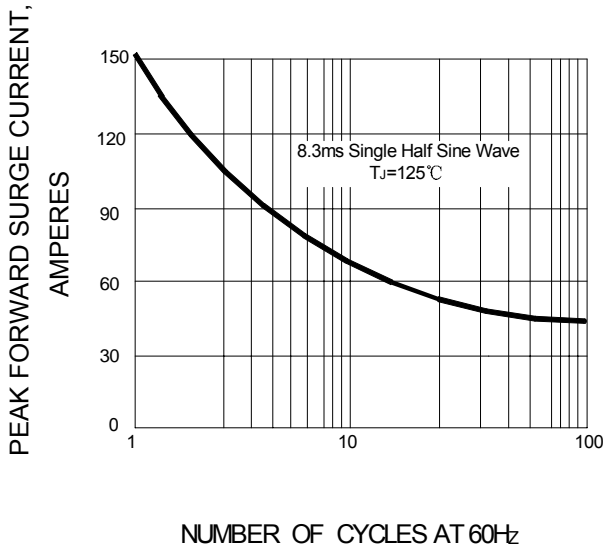


FIG.2 – FORWARD DERATING CURVE

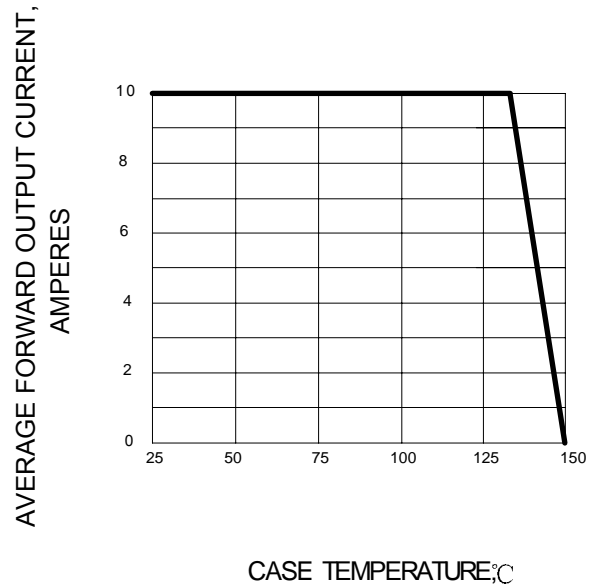


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

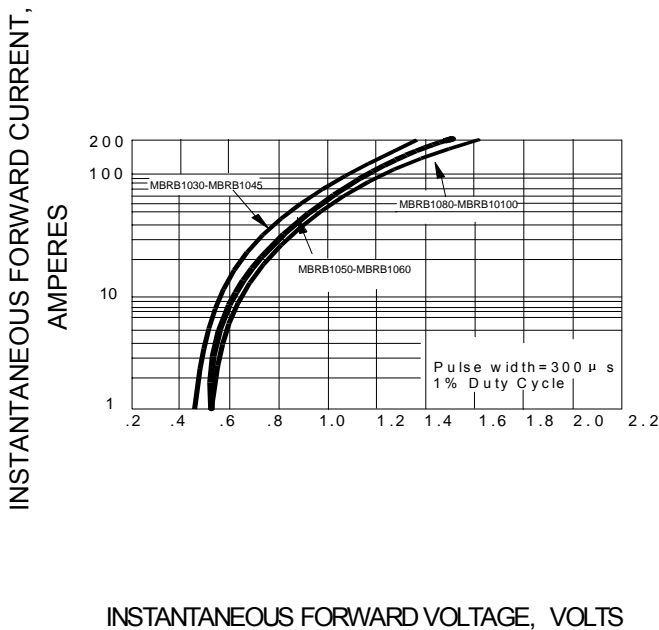


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

