

VOLTAGE RANGE: 45 V
CURRENT: 25 A

- ◇ 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.

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

The drawing shows the K-HEATSINK with the following dimensions:

- Top View:**
 - Overall width: 0.421 (10.69) mm, 0.380 (9.65) mm
 - Top width: 0.190 (4.83) mm, 0.172 (4.37) mm
 - Internal width: 0.055 (1.40) mm, 0.045 (1.14) mm
 - Internal width (lower): 0.364 (9.25) mm, 0.325 (8.25) mm
- Side View:**
 - Overall height: 0.625 (15.88) mm, 0.575 (14.60) mm
 - Internal height: 0.110 (2.79) mm, 0.090 (2.29) mm
 - Internal height (lower): 0.025 (0.64) mm, 0.012 (0.30) mm
 - Internal height (lower): 0.115 (2.92) mm, 0.080 (2.03) mm
- Detail View:**
 - Pin 1: 0.045 (1.14) mm, 0.020 (0.51) mm
 - Pin 2: 0.220 (5.58) mm, 0.180 (4.58) mm
 - Pin 3: 0.35 (8.89) ref.

inch(mm)

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%.

		MBRB2545CT	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	32	V
Maximum DC blocking voltage	V_{DC}	45	V
Maximum average forw ard total device rectified current @ $T_C = 130^{\circ}C$	$I_{F(AV)}$	25	A
Peak forw ard surge current 8.3ms single half sine-w ave superimposed on rated load	I_{FSM}	150	A
Maximum forw ard voltage (Note 1)	V_F	0.82 0.73	V
Maximum reverse current at rated DC blocking voltage	I_R	0.2 40	m A
Maximum thermal resistance (Note2)	$R_{\theta JC}$	1.5	$^{\circ}C/W$
Operating junction temperature range	T_J	- 55 ---- + 150	$^{\circ}C$
Storage temperature range	T_{STG}	- 55 ---- + 150	$^{\circ}C$

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

2. Thermal resistance from junction to case.

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FIG.1 – PEAK FORWARD SURGE CURRENT

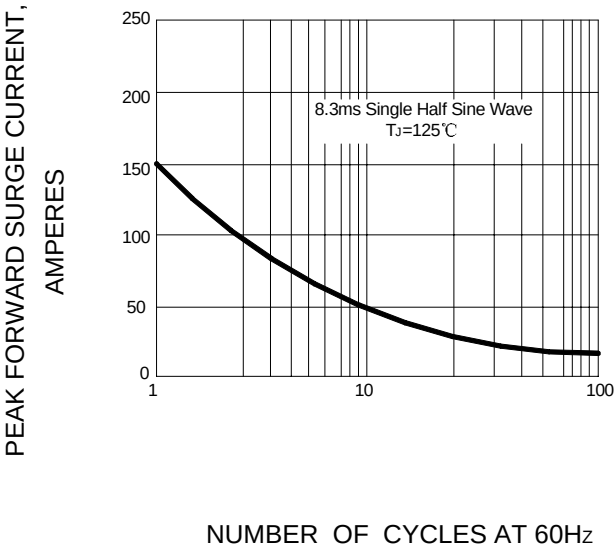


FIG.2 – FORWARD DERATING CURVE

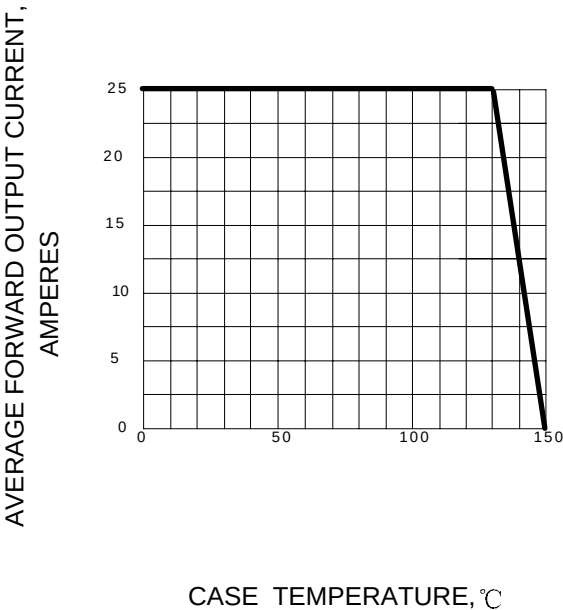


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

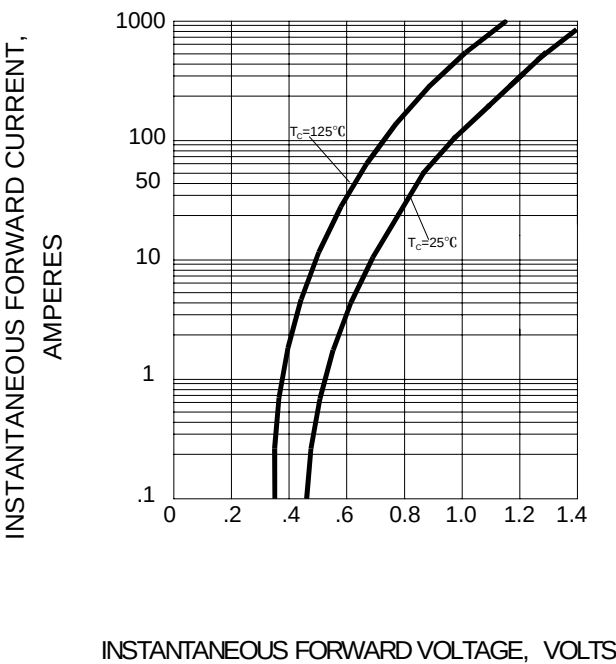


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

