

### DUAL SCHOTTKY RECTIFIERS

VOLTAGE RANGE: 35 - 60 V

CURRENT: 16 A

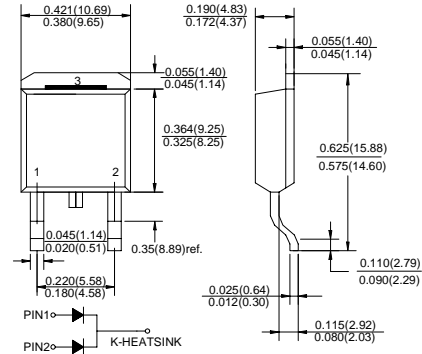
#### FEATURES

- ◇ 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 D<sup>2</sup>PAK, molded plastic body
- ◇ Terminals: Leads, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.087 ounces, 2.2 gram
- ◇ Position: Any

#### D<sup>2</sup>PAK



inch(mm)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

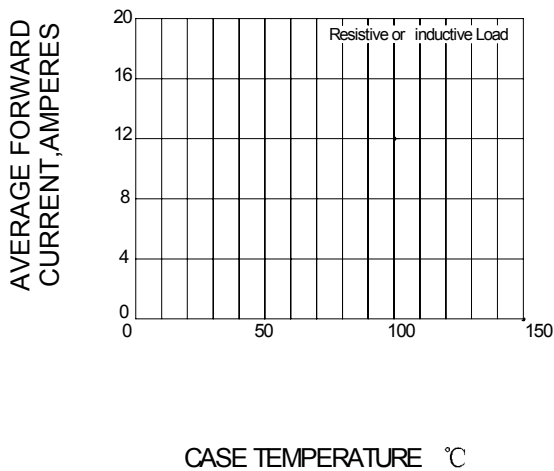
|   |                 | MBRB 1635CT     | MBRB 1645CT | MBRB 1650CT | MBRB 1660CT | UNITS                     |
|---|-----------------|-----------------|-------------|-------------|-------------|---------------------------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$       | 35              | 45          | 50          | 60          | V                         |
| Maximum RMS Voltage   | $V_{RMS}$       | 25              | 32          | 35          | 42          | V                         |
| Maximum DC blocking voltage   | $V_{DC}$        | 35              | 45          | 50          | 60          | V                         |
| Maximum average forward total device rectified current @ $T_c = 125^\circ\text{C}$  | $I_{F(AV)}$     | 16.0            |             |             |             | A                         |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load   | $I_{FSM}$       | 150.0           |             |             |             | A                         |
| Maximum forward voltage per leg<br>( $I_F=8.0A, T_c=25^\circ\text{C}$ )<br>(NOTE 1) ( $I_F=8.0A, T_c=125^\circ\text{C}$ ) | $V_F$           | 0.63            |             | 0.75        |             | V                         |
| Maximum reverse current @ $T_c=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_c=125^\circ\text{C}$                | $I_R$           | 0.2             |             | 1.0         |             | mA                        |
| Maximum thermal resistance (NOTE 2)   | $R_{\theta JC}$ | 1.5             |             |             |             | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range  | $T_J$           | - 55 ---- + 150 |             |             |             | $^\circ\text{C}$          |
| Storage temperature range   | $T_{STG}$       | - 55 ---- + 175 |             |             |             | $^\circ\text{C}$          |

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

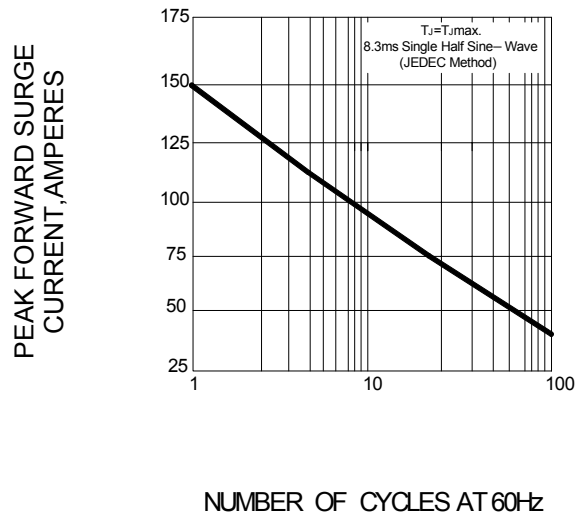
2. Thermal resistance from junction to case and thermal resistance from junction to ambient.

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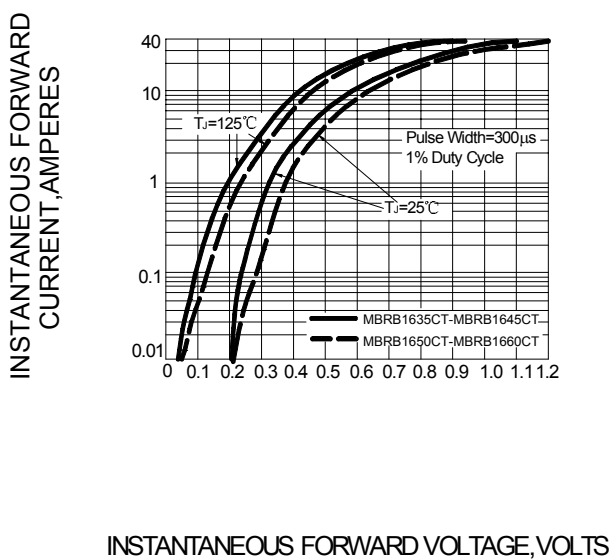
**FIG.1 – FORWARD CURRENT DERATING CURVE**



**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG**



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PERLEG**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

