

### DUAL SCHOTTKY RECTIFIERS

VOLTAGE RANGE: 30 - 60 V

CURRENT: 10 A

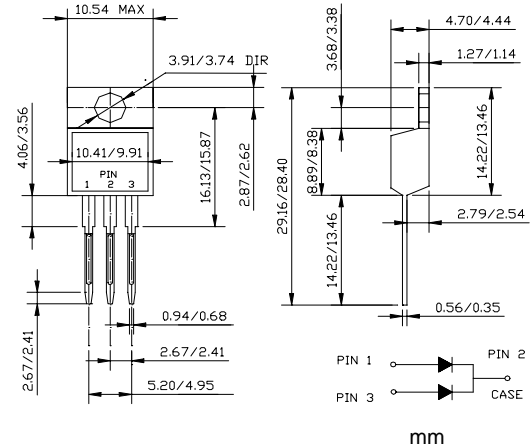
#### FEATURES

- ◇ 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 TO-220AB, molded plastic body
- ◇ Terminals: Leads, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.08 ounce, 2.24 grams
- ◇ Position: Any

#### TO-220AB



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

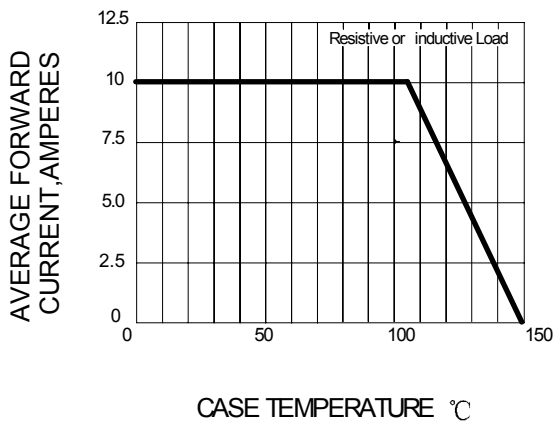
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		MBR 1030CT	MBR 1035CT	MBR 1040CT	MBR 1045CT	MBR 1050CT	MBR 1060CT	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	30	35	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	21	25	28	32	35	42	V
Maximum DC blocking voltage	$V_{DC}$	30	35	40	45	50	60	V
Maximum average forward total device rectified current @ $T_c = 105^\circ C$	$I_{F(AV)}$	10.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	125.0						A
Maximum forward voltage per leg (NOTE 1)	$V_F$		0.57 0.70 0.84				0.70 0.80 0.95	V
Maximum reverse current at rated DC blocking voltage	$I_R$			0.1 15.0				m A
Maximum thermal resistance per leg	$R_{\theta JC}$			30				K/W
Operating junction temperature range	$T_J$			- 55	-----	+ 150		°C
Storage temperature range	$T_{STG}$			- 55	-----	+ 150		°C

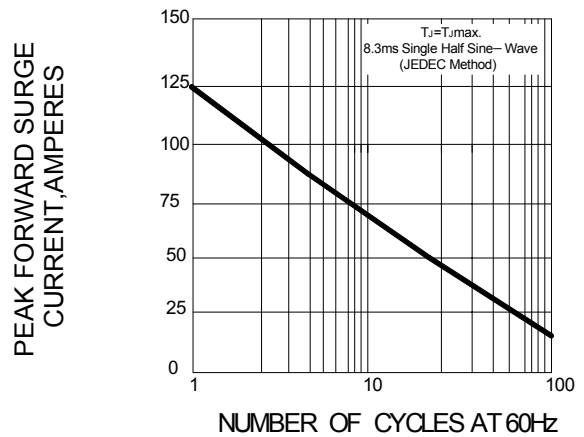
NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.  
 2. 2.0µs pulse width, f=1.0KHz  
 3. Thermal resistance from junction to case.

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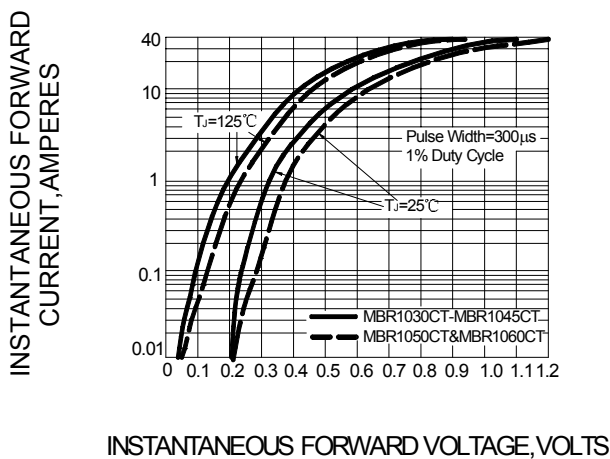
**FIG.1 – FORWARD CURRENT DERATING CURVE**



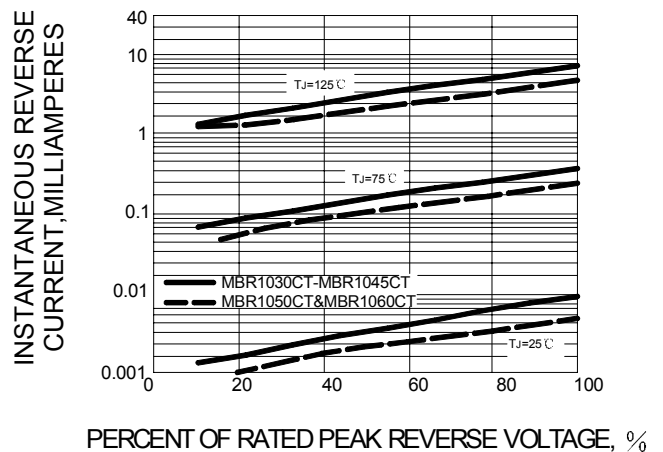
**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



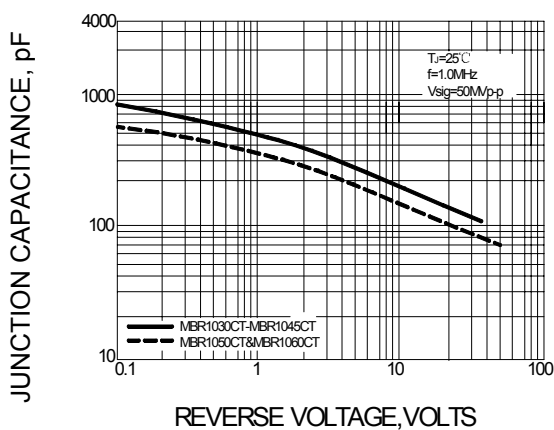
**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG**

