

DUAL SCHOTTKY RECTIFIERS

VOLTAGE RANGE: 30 - 60 V

CURRENT: 10 A

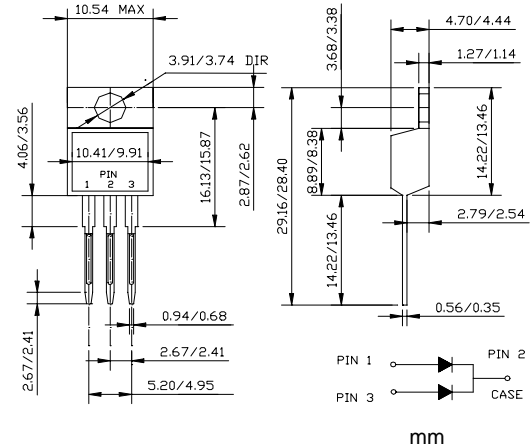
FEATURES

- ◇ 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 @ $T_c = 105^\circ\text{C}$	$I_{F(AV)}$	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		V
			0.70			0.80		
			0.84			0.95		
Maximum reverse current at rated DC blocking voltage	I_R			0.1				m A
				15.0				
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

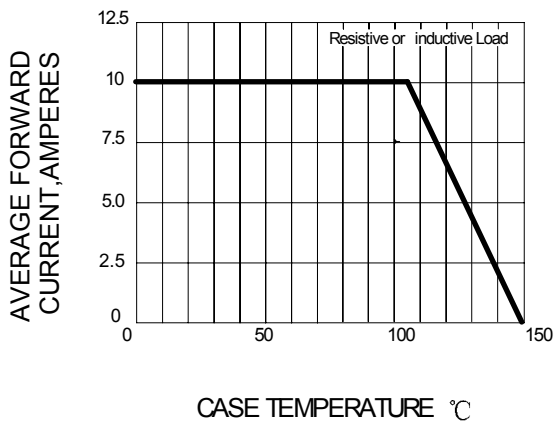


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

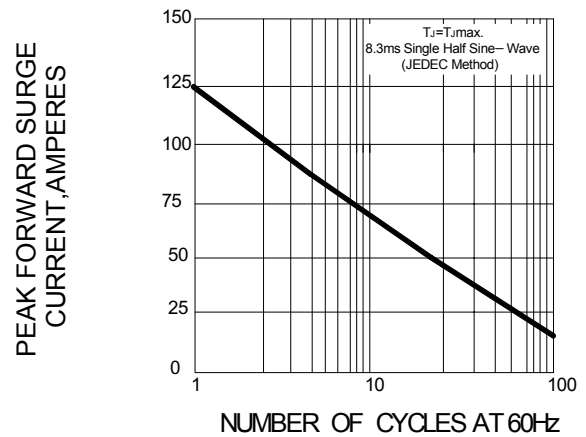


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG

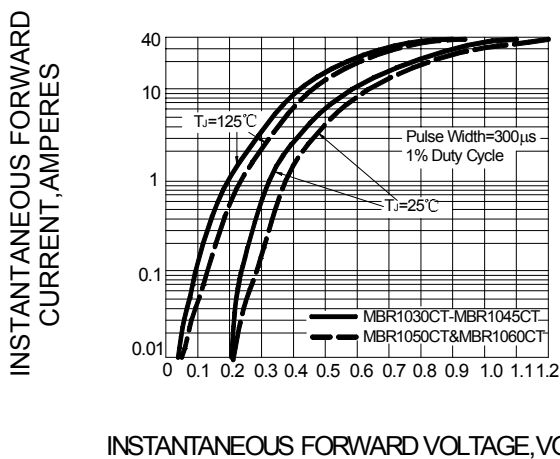


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

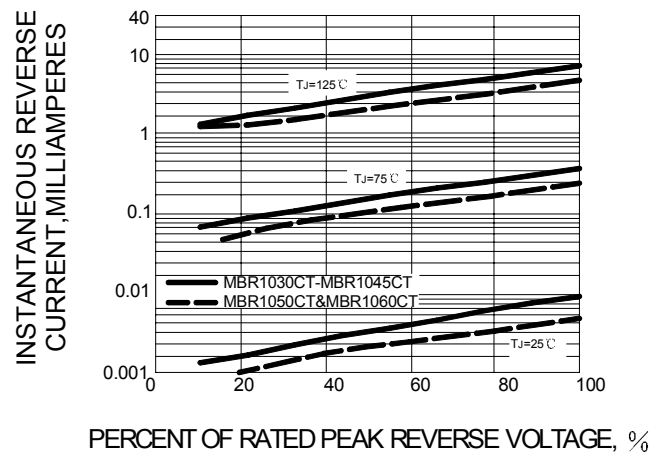


FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG

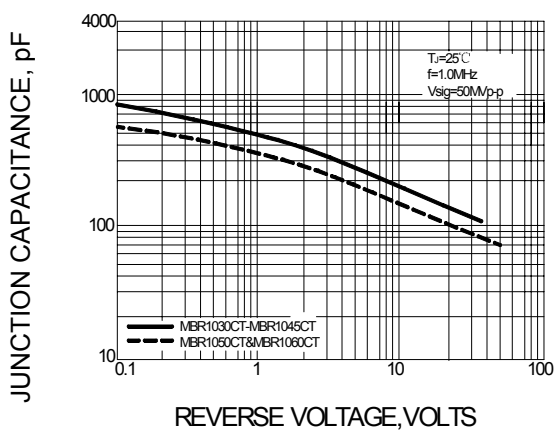


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

