

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 30 - 60 V
CURRENT: 20 A

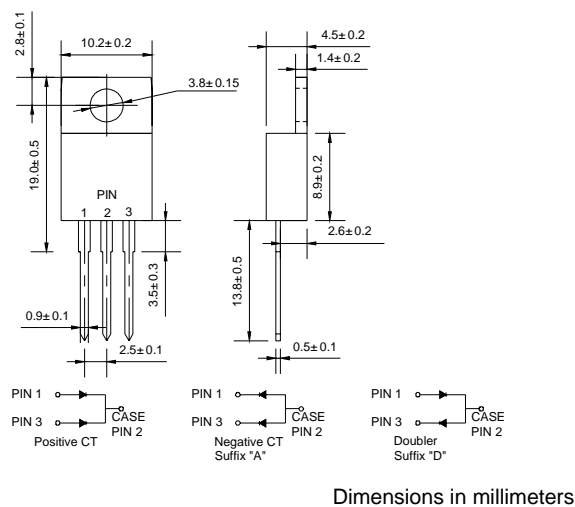
FEATURES

- ◇ 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: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.071ounce, 2.006 grams

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 2030CT	MBR 2035CT	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	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 @ $T_c = 120^\circ\text{C}$	$I_{F(AV)}$	20						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250						A
Maximum forward voltage (Note 1)	V_F	-				0.75	0.70	V
		0.57				0.95	0.85	
		0.84						
		0.72						
Maximum reverse current at rated DC blocking voltage	I_R	0.1				0.1		m A
		15				50		
Maximum thermal resistance (Note2)	$R_{\theta JC}$	2.0						$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ---- + 150						$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150						$^\circ\text{C}$

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

2. Thermal resistance from junction to case.

FIG.1 – PEAK FORWARD SURGE CURRENT

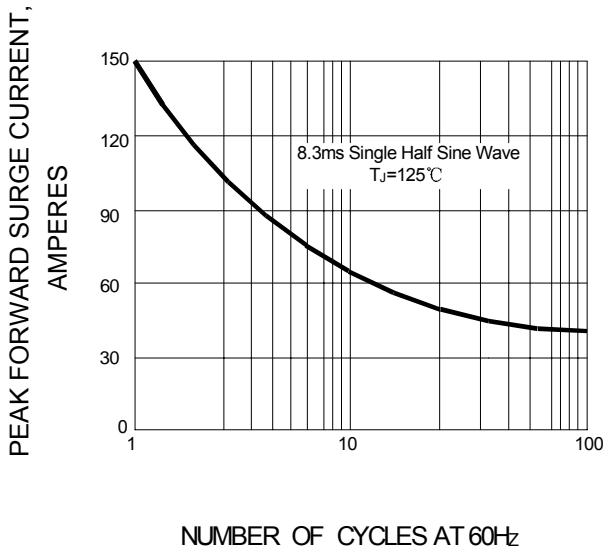


FIG.2 – FORWARD DERATING CURVE

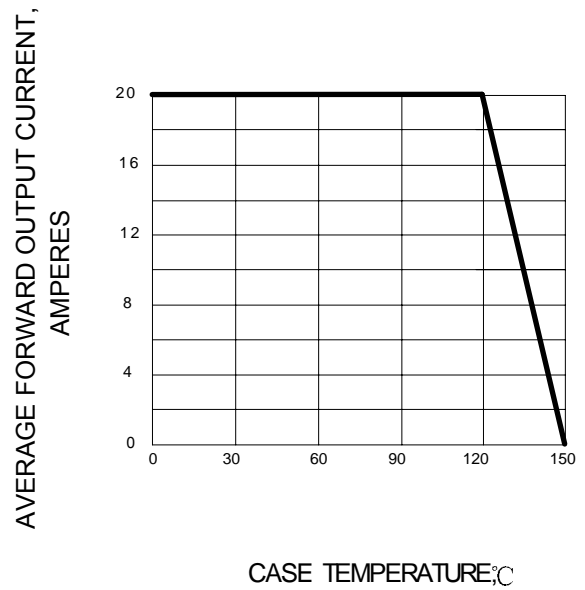


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

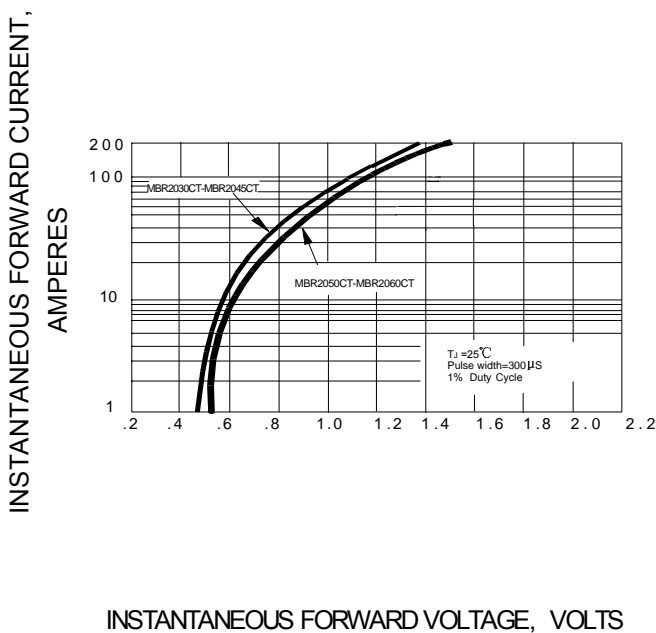


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

