

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 30 to 60 Volts
FORWARD CURRENT - 10 Amperes

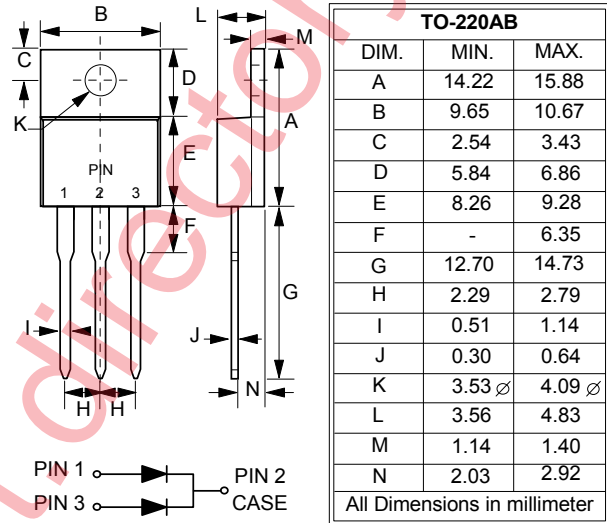
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case : TO-220AB molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

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%

CHARACTERISTICS	SYMBOL	MBR 1030CT	MBR 1035CT	MBR 1040CT	MBR 1045CT	MBR 1050CT	MBR 1060CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	30	35	40	45	50	60	V
Maximum RMS Voltage	VRMS	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	VDC	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current at TC=105°C (See Fig.1)	I(AV)	10						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	IFSM	125						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage, (Note 1)	VF		0.57 @IF=5A TJ=25°C 0.70 @IF=5A TJ=25°C 0.84 @IF=10A TJ=125°C				0.65 0.80 0.90	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR				0.1 15			mA
Typical Junction Capacitance, per element (Note 2)	CJ		170			220		pF
Typical Thermal Resistance (Note 3)	RθJC	3.0						°C/W
Operating Temperature Range	TJ	-55 to +150						°C
Storage Temperature Range	TSTG	-55 to +175						°C

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.
2. Thermal Resistance Junction to Case.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

FIG.1 - FORWARD CURRENT DERATING CURVE

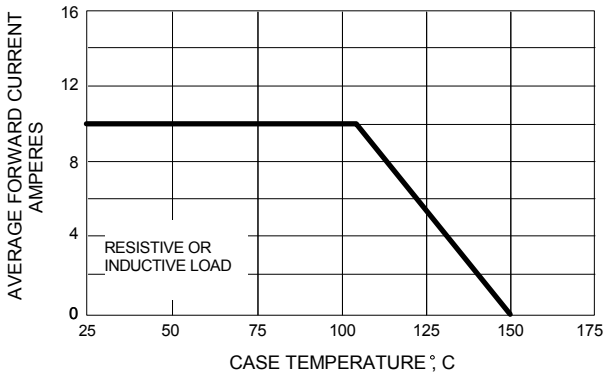


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

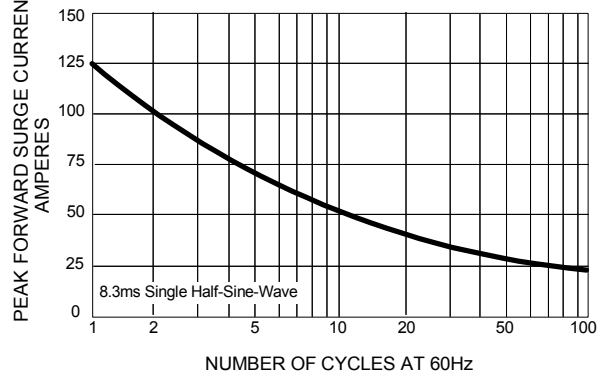


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

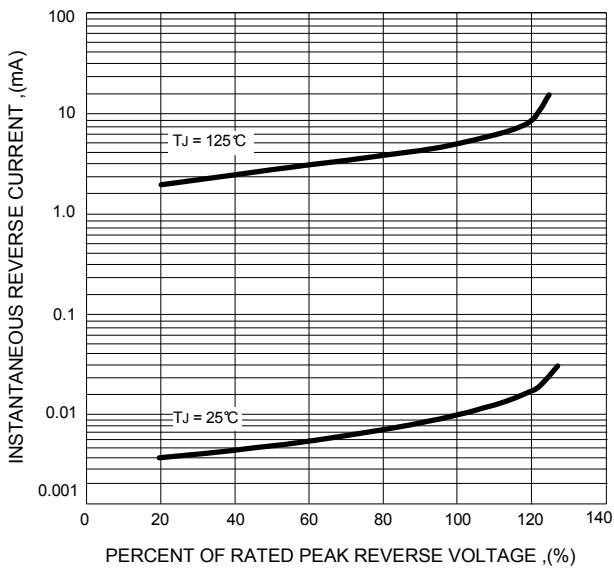


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

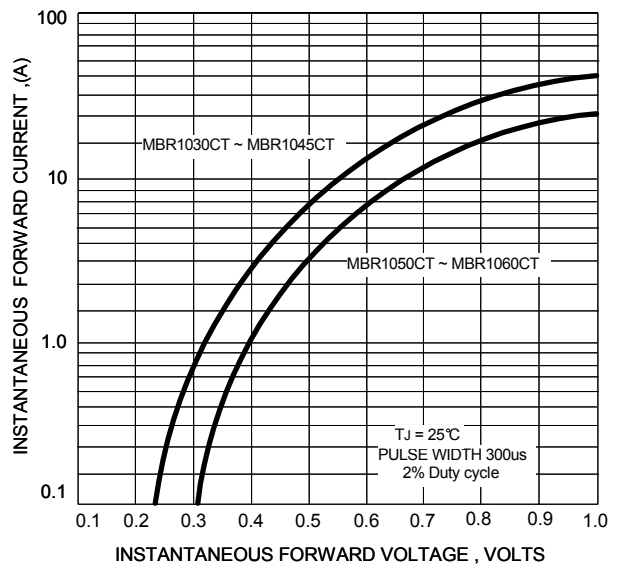


FIG.5 - TYPICAL JUNCTION CAPACITANCE

