

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **150 to 200** Volts
FORWARD CURRENT - **10** Amperes

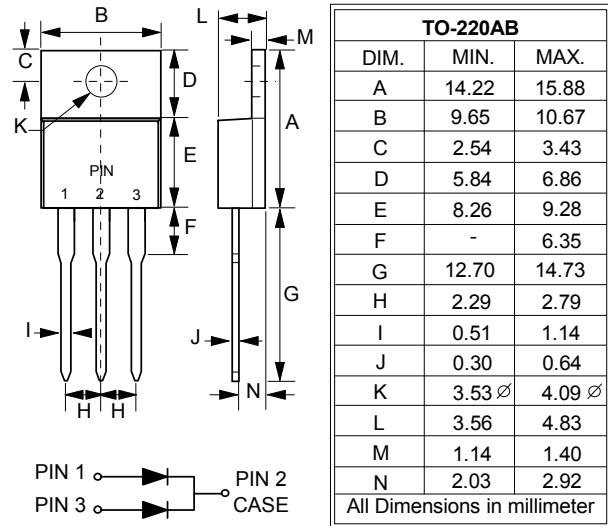
FEATURES

- 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

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.

CHARACTERISTICS	SYMBOL	MBR10150CT	MBR10200CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	150	200	V
Maximum RMS Voltage	VRMS	105	140	V
Maximum DC Blocking Voltage	VDC	150	200	V
Maximum Average Forward Rectified Current (See Fig.1) $T_c = 105^\circ\text{C}$	I(AV)	10		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	IFSM	120		A
Voltage Rate of Change (Rated VR)	dv/dt	10000		V/us
Maximum Forward Voltage (Note 1)	VF	IF=5A @ $T_J = 25^\circ\text{C}$ IF=5A @ $T_J = 125^\circ\text{C}$ IF=10A @ $T_J = 25^\circ\text{C}$ IF=10A @ $T_J = 125^\circ\text{C}$	0.92 0.75 1.00 0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	@ $T_J = 25^\circ\text{C}$ @ $T_J = 125^\circ\text{C}$	8 2	μA mA
Typical Thermal Resistance (Note 2)	R θ JC	3.0		$^\circ\text{C}/\text{W}$
Typical Junction Capacitance per element (Note 3)	CJ	300		pF
Operating Temperature Range	TJ	-65 to +175		$^\circ\text{C}$
Storage Temperature Range	TSTG	-65 to +175		$^\circ\text{C}$

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

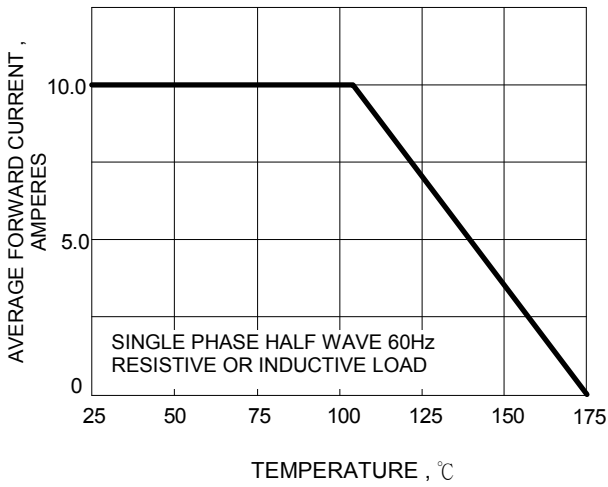


FIG.2 - MAXIMUM NONREPETITIVE SURGE CURRENT

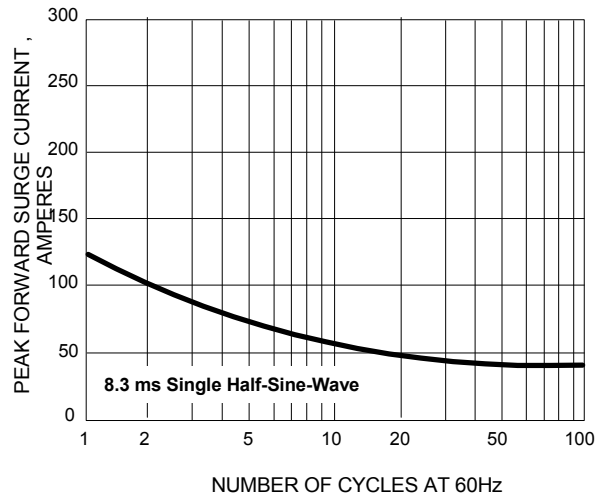


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

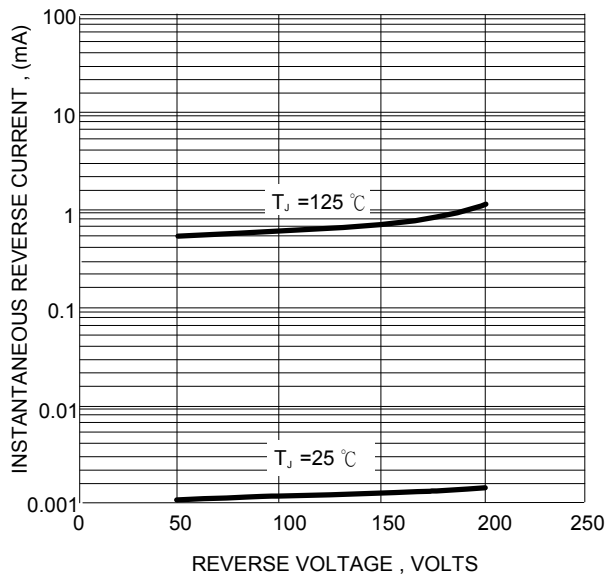


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

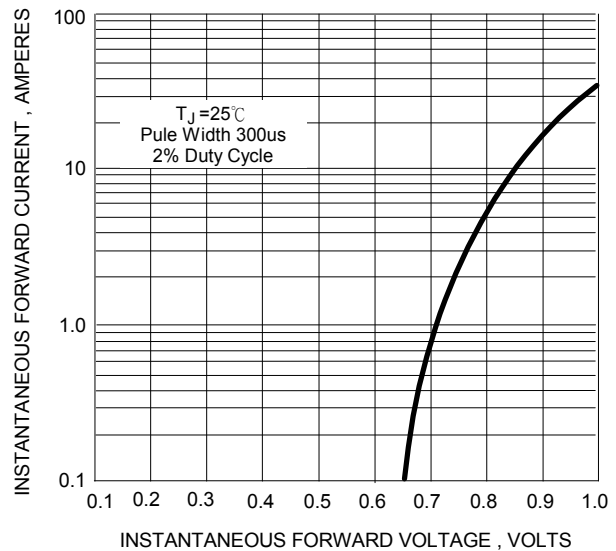
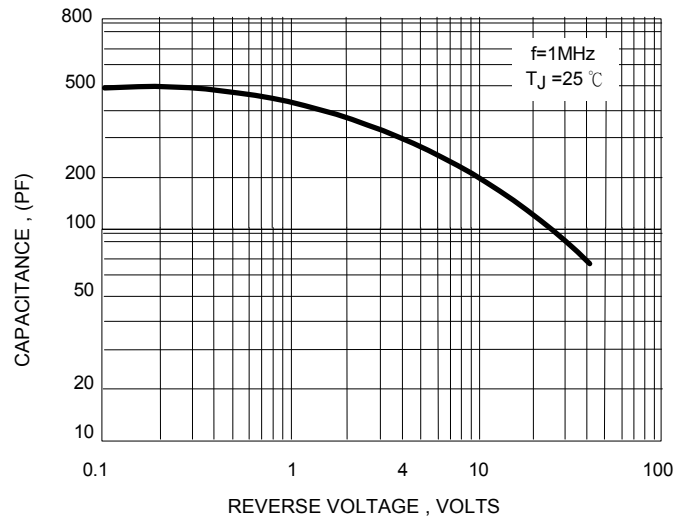


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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