

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **100** Volts
FORWARD CURRENT - **30** Amperes

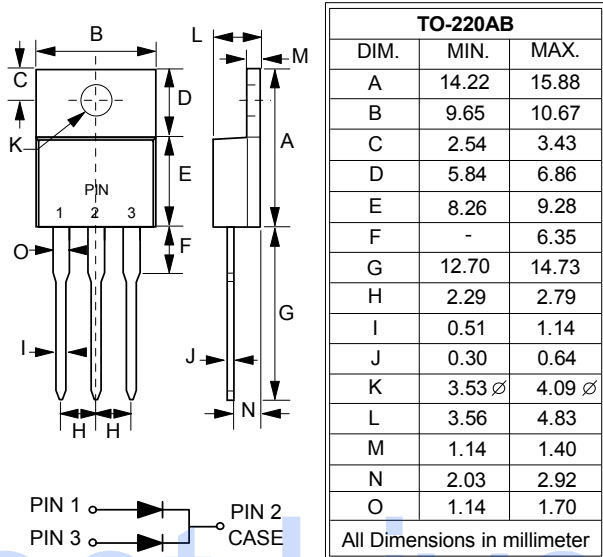
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- Low leakage current
- 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	MBR30100CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	100	V
Maximum RMS Voltage	VRMS	70	V
Maximum DC Blocking Voltage	VDC	100	V
Maximum Average Forward Rectified Current (See Fig.1) $T_c = 125^\circ\text{C}$	I(AV)	30	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	IFSM	250	A
Voltage Rate of Change (Rated VR)	dv/dt	10000	V/us
Maximum Forward Voltage (Note 1) IF=15A @ $T_J = 25^\circ\text{C}$ IF=15A @ $T_J = 125^\circ\text{C}$ IF=30A @ $T_J = 25^\circ\text{C}$ IF=30A @ $T_J = 125^\circ\text{C}$	VF	0.80 0.67 0.93 0.80	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J = 25^\circ\text{C}$ @ $T_J = 125^\circ\text{C}$	IR	100 5	μA mA
Typical Thermal Resistance (Note 2)	R θ JC	1.4	$^\circ\text{C}/\text{W}$
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.

REV. 3, Oct-2010, KTHC20

FIG.1 - FORWARD CURRENT DERATING CURVE

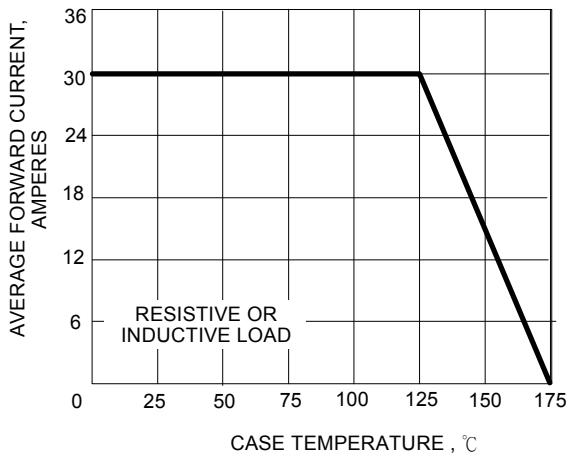


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

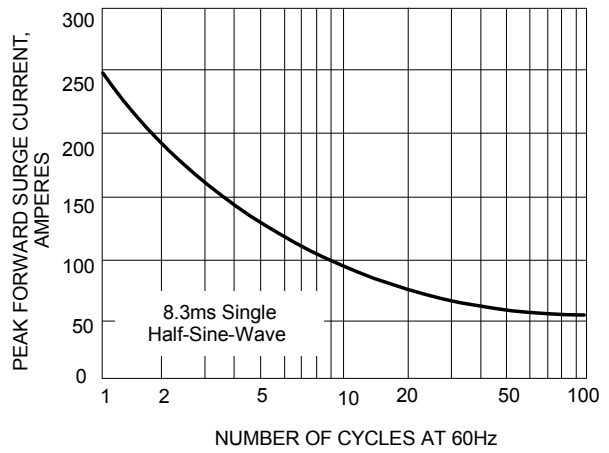


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

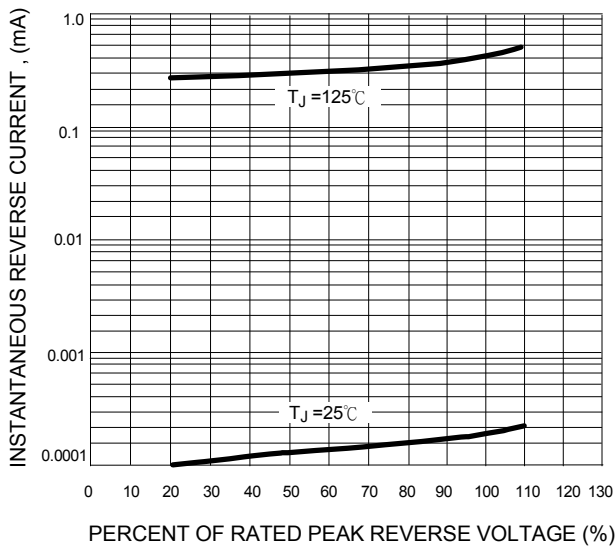


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

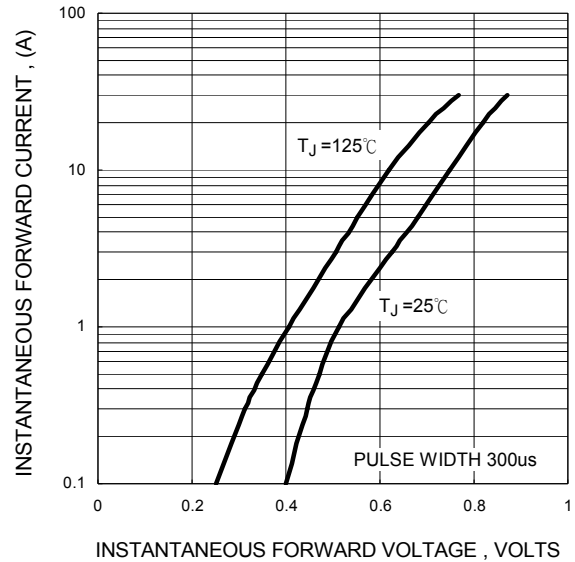
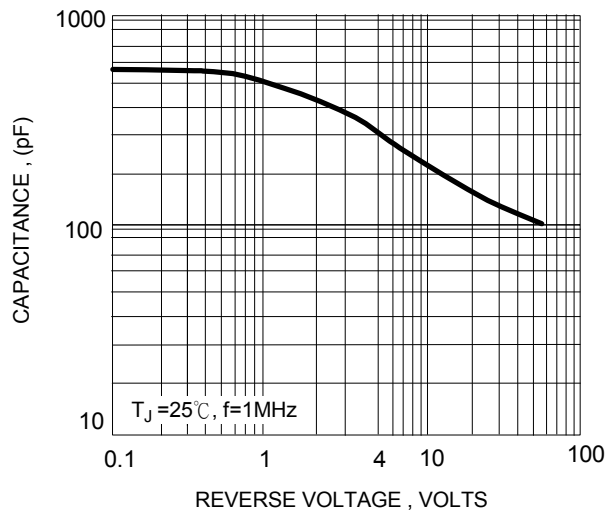


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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