

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30 to 45** Volts
FORWARD CURRENT - **10** Amperes

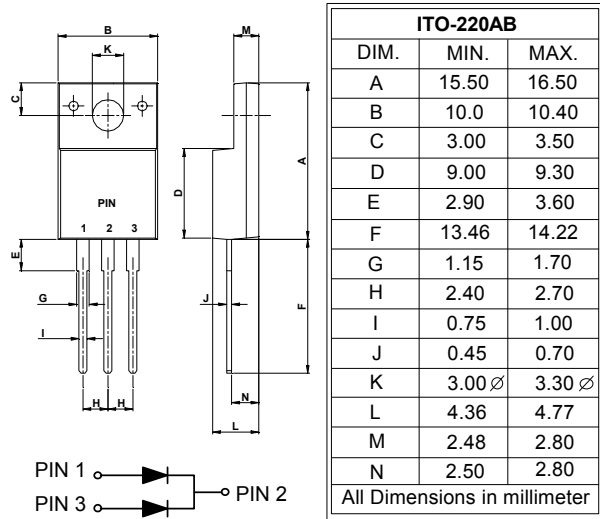
FEATURES

- 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 : ITO-220AB molded plastic
- Polarity : As marked on the body
- Weight : 0.06 ounces, 1.7 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

ITO-220AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBRF1030CT	MBRF1040CT	MBRF1045CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	30	40	45	V
Maximum RMS Voltage	VRMS	21	28	31.5	V
Maximum DC Blocking Voltage	VDC	30	40	45	V
Maximum Average Forward Rectified Current at TC=120°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) @IF=5A TJ=125°C @IF=5A TJ=25°C @IF=10A TJ=125°C	VF		0.57 0.70 0.84		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ=25°C @TJ=125°C	IR		0.1 15		mA
Typical Junction Capacitance, per element (Note 2)	CJ		280		pF
Typical Thermal Resistance (Note 3, 4)	RθJC		4.0		°C/W
Operating Temperature Range	TJ		-55 to +150		°C
Storage Temperature Range	TSTG		-55 to +175		°C
Dielectric Strength from terminals to case, AC with t=1 minute, RH<30%	Vdis		2000		V

- 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.
4. Device mounted on 50mm x 50 mm x 2 mm Cu Plate.

REV. 2, Oct-2010, KTHC50

FIG.1 - FORWARD CURRENT DERATING CURVE

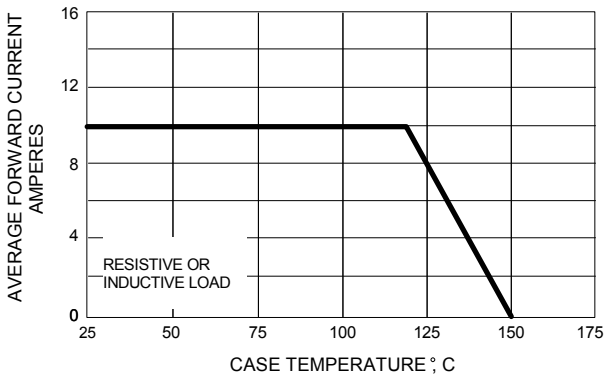


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

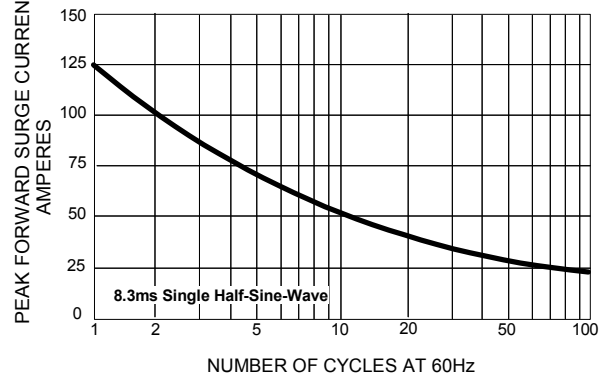


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

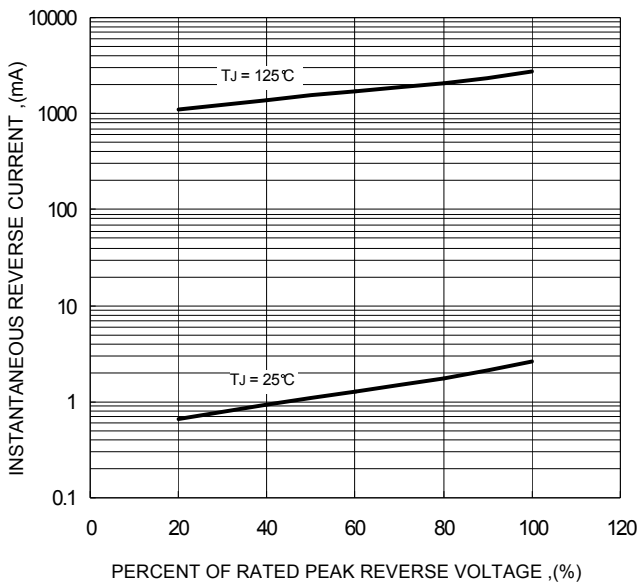


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

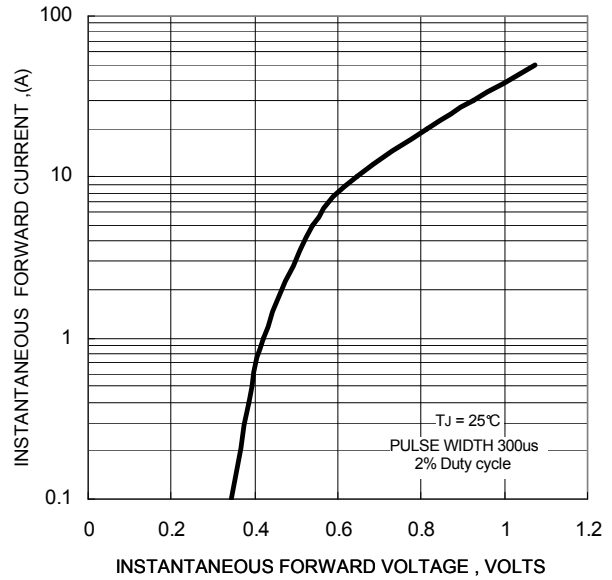
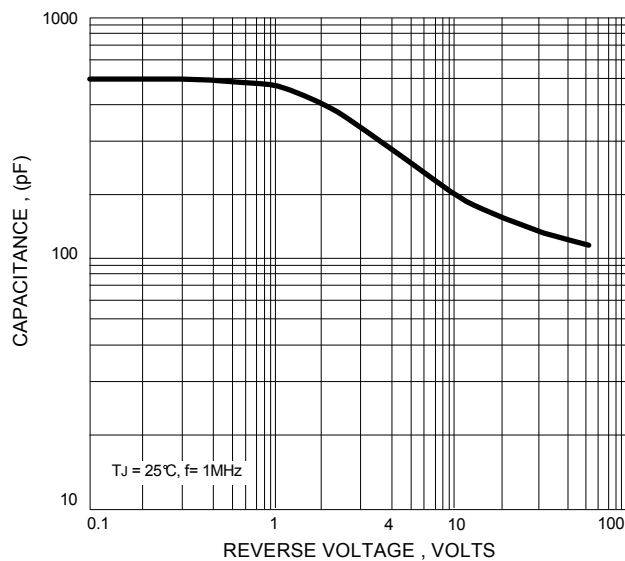


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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