

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30 to 60** Volts
FORWARD CURRENT - **7.5** Amperes

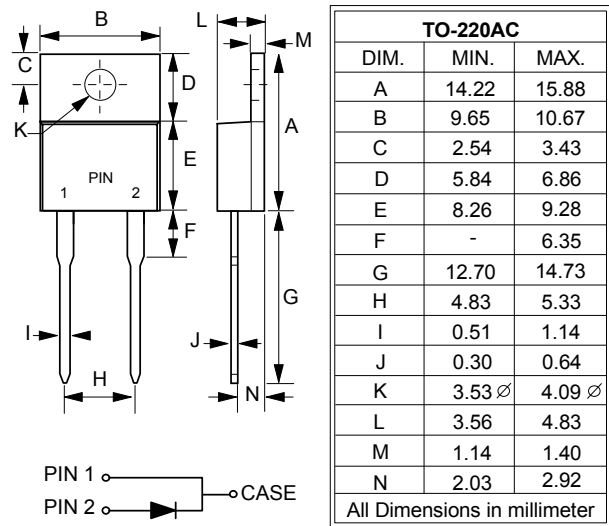
FEATURES

- 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-220AC 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-220AC



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	MBR730	MBR735	MBR740	MBR745	MBR750	MBR760	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	35	40	45	50	60	V
Maximum RMS Voltage	V _{RMS}	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	V _{DC}	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current (See Fig.1) @T _C =125°C	I _(AV)	7.5						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1) I _F =7.5A @ T _J =25°C I _F =7.5A @ T _J =125°C I _F =15A @ T _J =25°C I _F =15A @ T _J =125°C	V _F	- 0.57 0.84 0.72				0.75 0.65 - -		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	I _R	0.1 15				0.5 50		mA
Typical Thermal Resistance (Note 2)	R _{θJC}	3.5						°C/W
Typical Junction Capacitance (Note 3)	C _J	400						pF
Operating Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +175						°C

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

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FIG.1 - FORWARD CURRENT DERATING CURVE

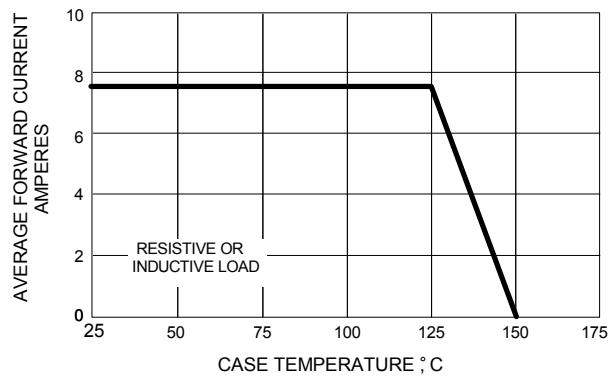


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

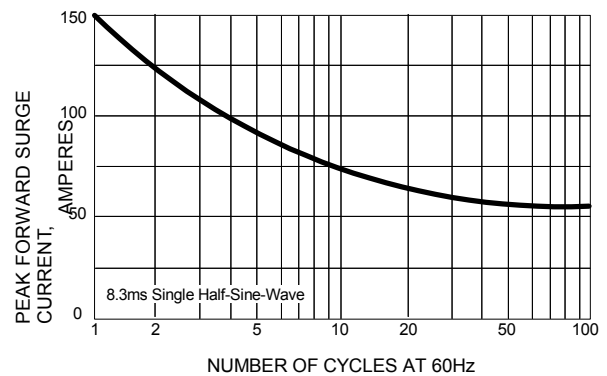


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

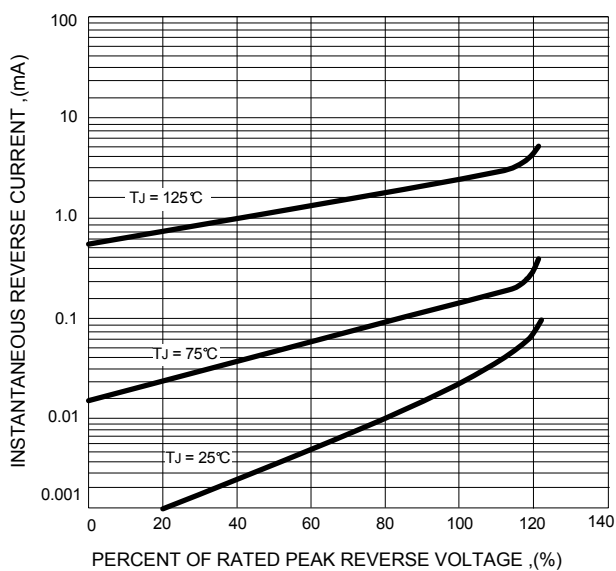


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

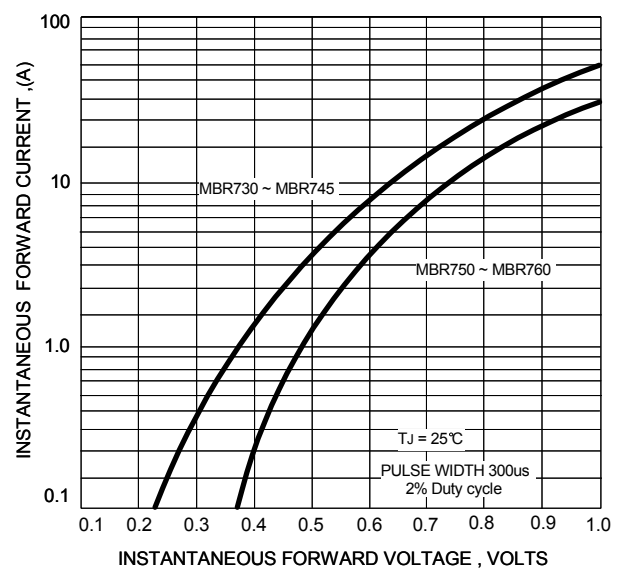


FIG.5 - TYPICAL JUNCTION CAPACITANCE

