

SCHOTTKY BARRIER RECTIFIERS

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

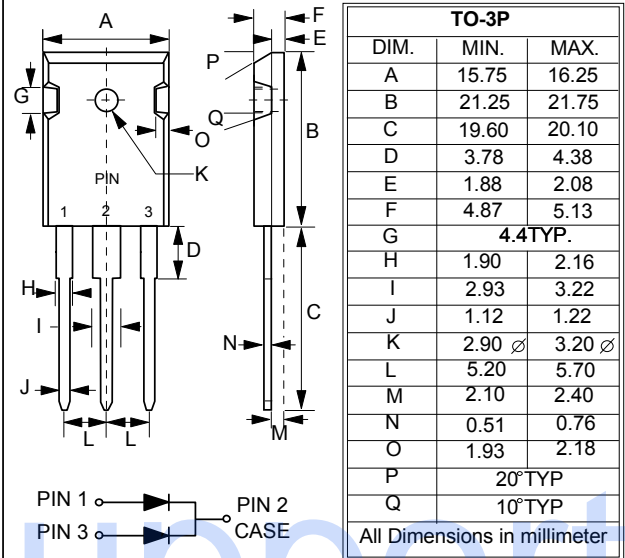
FEATURES

- Metal of silicon rectifier, majority carrier conductor
- 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-3P molded plastic
- Polarity : As marked on the body
- Weight : 0.2 ounces, 5.6 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-3P



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBR 3030PT	MBR 3035PT	MBR 3040PT	MBR 3045PT	MBR 3050PT	MBR 3060PT	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 (See Fig.1) @TC=125°C	IAV	30						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	200						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1)	VF	IF=15A @ TJ=25°C	-	0.57	0.85	0.75	0.90	V
		IF=15A @ TJ=125°C	0.84	0.72	1.05	0.90		
		IF=30A @ TJ=25°C	0.84					
		IF=30A @ TJ=125°C	0.72					
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ=25°C @TJ=125°C	IR		0.02	60		5	100	mA
Typical Thermal Resistance (Note 2)	RθJC	1.4						°C/W
Typical Junction Capacitance per element (Note 3)	CJ	500						pF
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

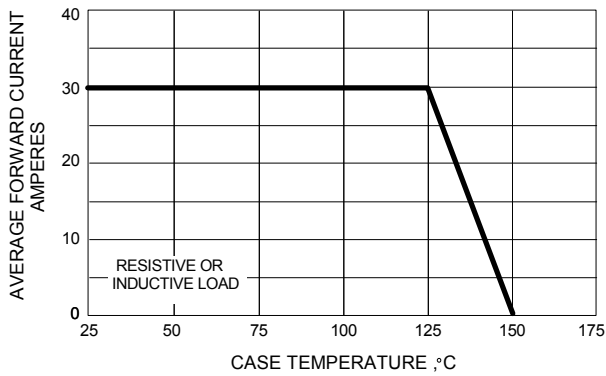


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

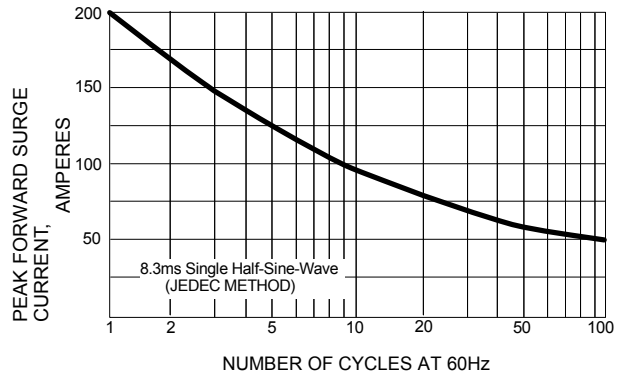


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

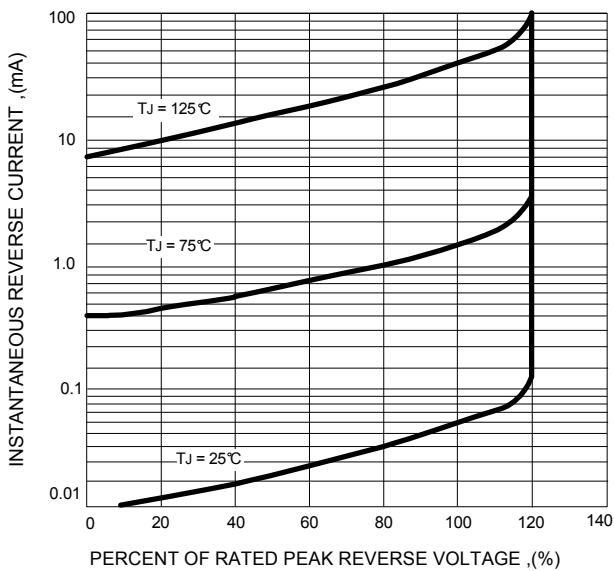


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

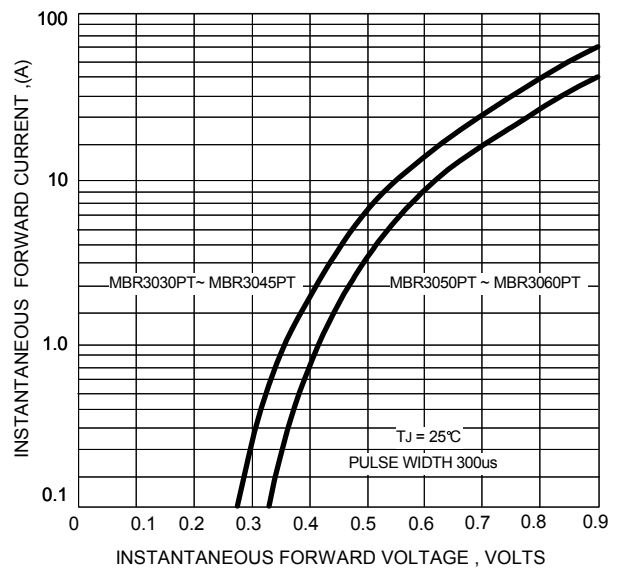
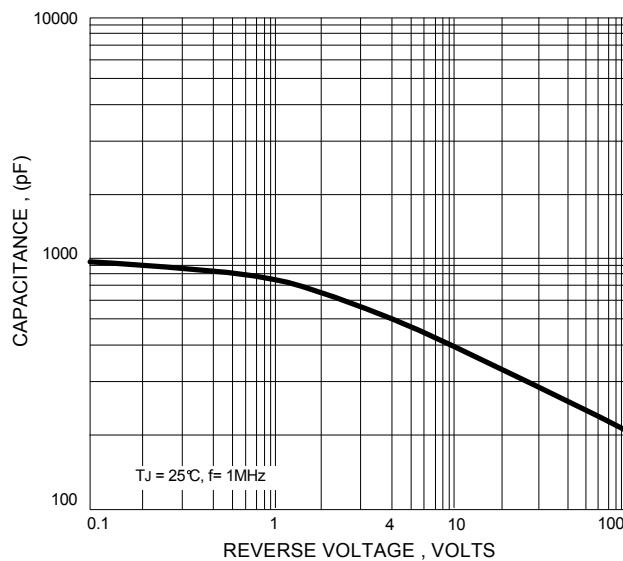


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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