

SCHOTTKY BARRIER RECTIFIERS

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

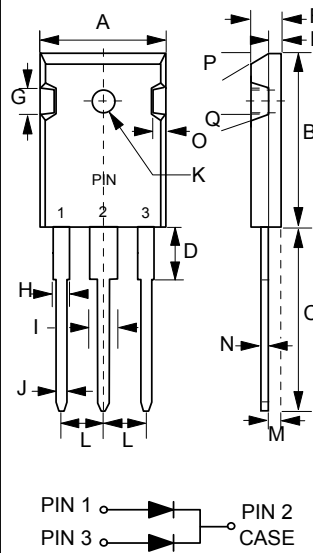
FEATURES

- 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-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



TO-3P		
DIM.	MIN.	MAX.
A	15.75	16.25
B	21.25	21.75
C	19.60	20.10
D	3.78	4.38
E	1.88	2.08
F	4.87	5.13
G	4.4 TYP.	
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90 \varnothing	3.20 \varnothing
L	5.20	5.70
M	2.10	2.40
N	0.51	0.76
O	1.93	2.18
P	20° TYP	
Q	10° TYP	
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBR30100PT	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)	VF	0.80 0.67 0.93 0.80	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	100 5	μA mA
Typical Thermal Resistance (Note 2)	R θ JC	1.4	°C/W
Typical Junction Capacitance per element (Note 3)	CJ	300	pF
Operating Temperature Range	TJ	-65 to +175	°C
Storage Temperature Range	TSTG	-65 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

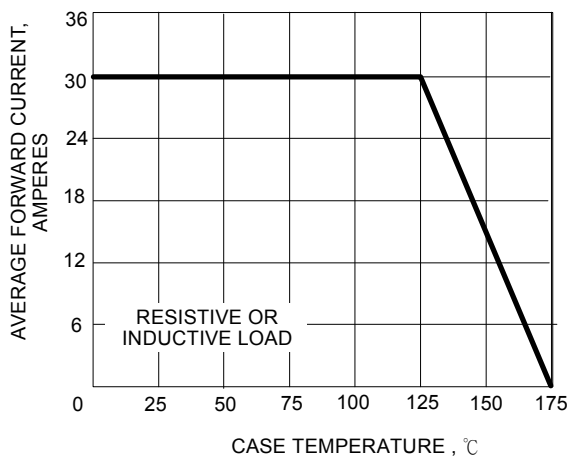


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

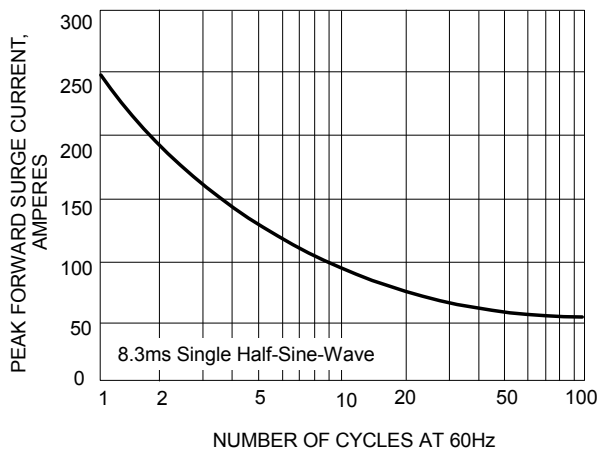


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

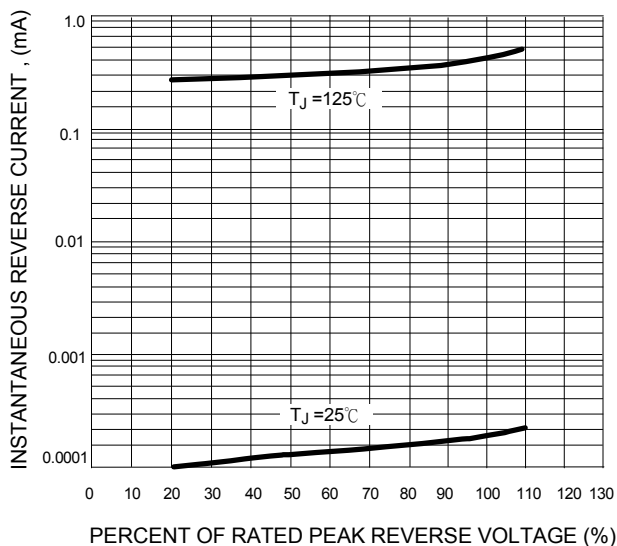


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

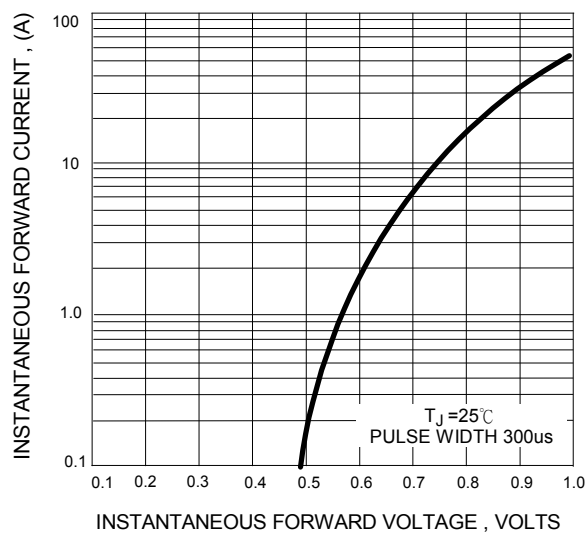
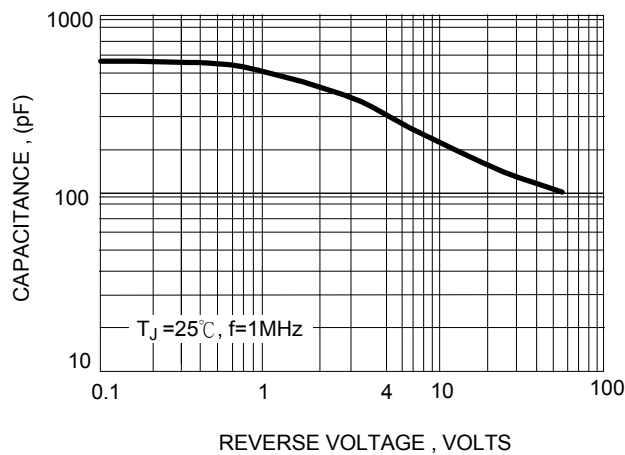


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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