

**SCHOTTKY BARRIER RECTIFIERS**

REVERSE VOLTAGE - **30 to 60** Volts  
FORWARD CURRENT - **40** Amperes

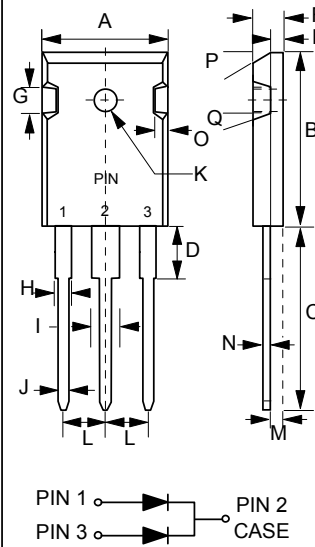
**FEATURES**

- 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-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**



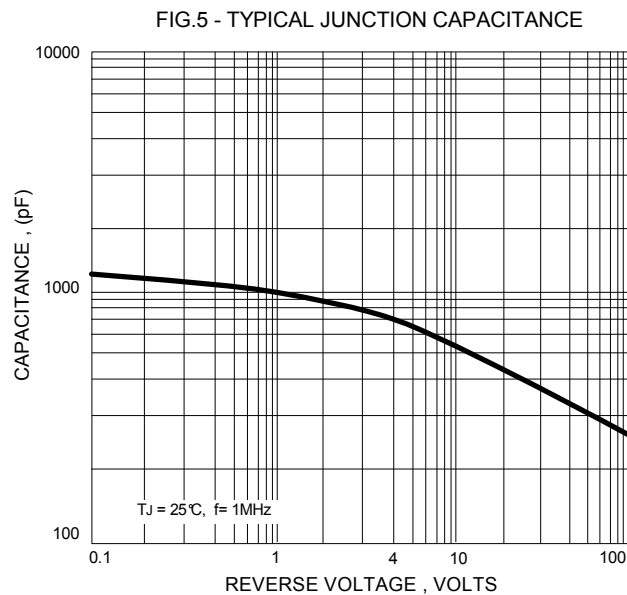
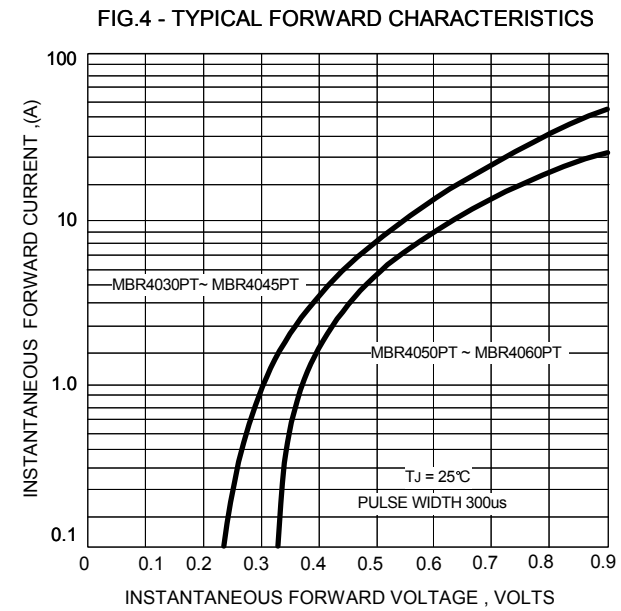
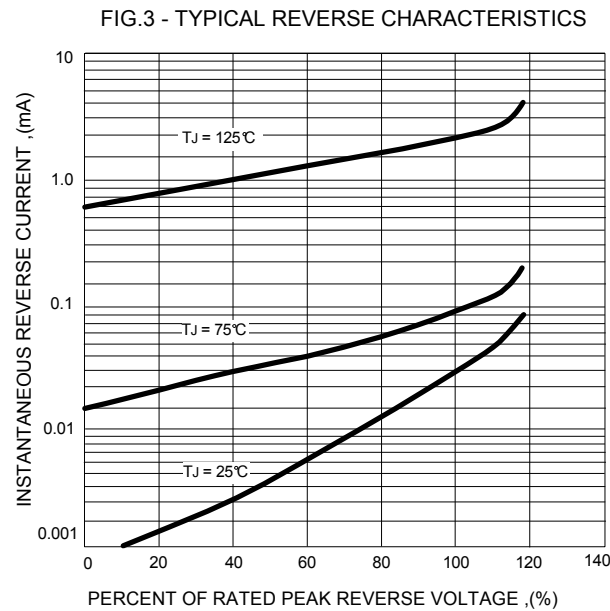
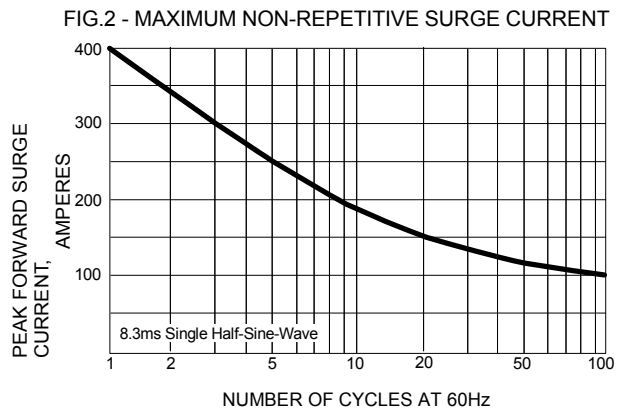
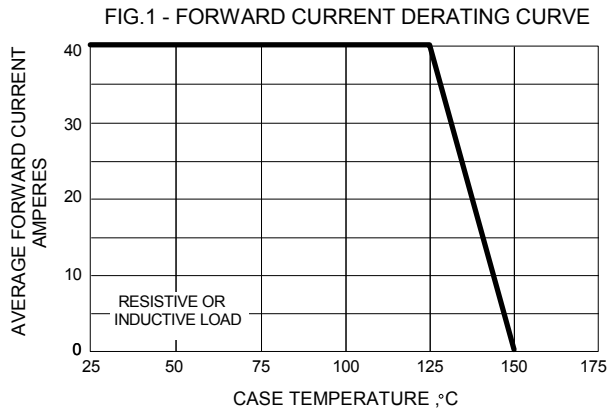
TO-3P		
DIM.	MIN.	MAX.
A	15.75	16.25
B	21.25	21.75
C	19.60	20.10
D	3.78	4.38
E	1.88	2.08
F	4.87	5.13
G	4.4 TYP.	
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90 $\varnothing$	3.20 $\varnothing$
L	5.20	5.70
M	2.10	2.40
N	0.51	0.76
O	1.93	2.18
P	20° TYP	
Q	10° TYP	
All Dimensions in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBR 4030PT	MBR 4035PT	MBR 4040PT	MBR 4045PT	MBR 4050PT	MBR 4060PT	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) @T <sub>C</sub> =125°C	I(AV)	40						A
Peak Forward Surge Current 8.3ms single half sine-wave @T <sub>J</sub> =25°C	I <sub>FSM</sub>	400						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1) I <sub>F</sub> =20A @ T <sub>J</sub> =25°C I <sub>F</sub> =20A @ T <sub>J</sub> =125°C I <sub>F</sub> =40A @ T <sub>J</sub> =25°C I <sub>F</sub> =40A @ T <sub>J</sub> =125°C	V <sub>F</sub>	0.70 0.60 0.80 0.75				0.80 0.70 - -		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =125°C	I <sub>R</sub>	0.1 100						mA
Typical Thermal Resistance (Note 2) Per leg Total	R <sub>θJC</sub>	1.5 1.2						°C/W
Typical Junction Capacitance per element (Note 3)	C <sub>J</sub>	700						pF
Operating Temperature Range	T <sub>J</sub>	-55 to +150						°C
Storage Temperature Range	T <sub>STG</sub>	-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.



## **Important Notice and Disclaimer**

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.