

# MBR4040PT-MBR40200PT 40A SCHOTTKY BARRIER RECTIFIER

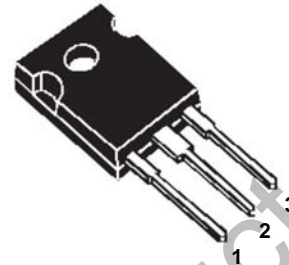


TO-3P(TO-247AD)

## MBR4040PT-MBR40200PT

### Features:

- Low power loss. high efficiency.  
High surge capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- Metal silicon junction, majority carrier conduction.
- High current Capability. low forward voltage drop.
- Guard ring for over voltage protection.



1. Anode 2. Cathode 3. Anode

### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	MBR 4040 PT	MBR 4045 PT	MBR 4050 PT	MBR 4060 PT	MBR 4080 PT	MBR 4090 PT	MBR 40100 PT	MBR 40150 PT	MBR 40200 PT	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	
Maximum DC Blocking Voltage	$V_{R(DC)}$	40	45	50	60	80	90	100	150	200	
Maximum Average Forward Current	$I_{F(AV)}$	40									A
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	350									
Maximum Forward Voltage at 20A per leg	$V_F$	0.65		0.72		0.84			0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_j=25^\circ\text{C}$	0.1							0.05		mA
	$T_j=125^\circ\text{C}$	20									
Maximum Operating Junction Temperature	$T_j$	150				175					°C
Storage Temperature	$T_{stg}$	-55~+150				-65~+175					
Typical Thermal Resistance	$R_{\theta JC}$	1.3									°C/W

Typical Characteristics

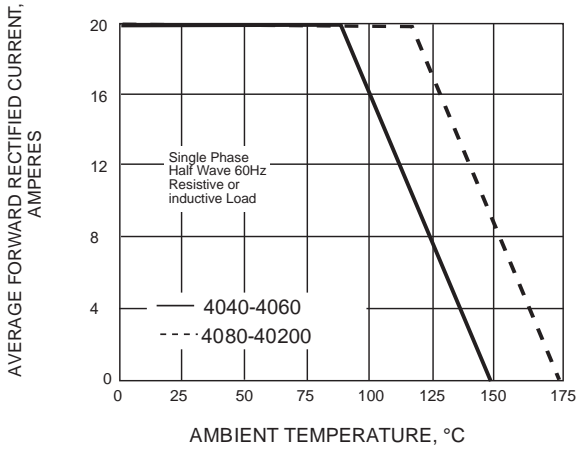


Fig.1 FORWARD CURRENT DERATING CURVE

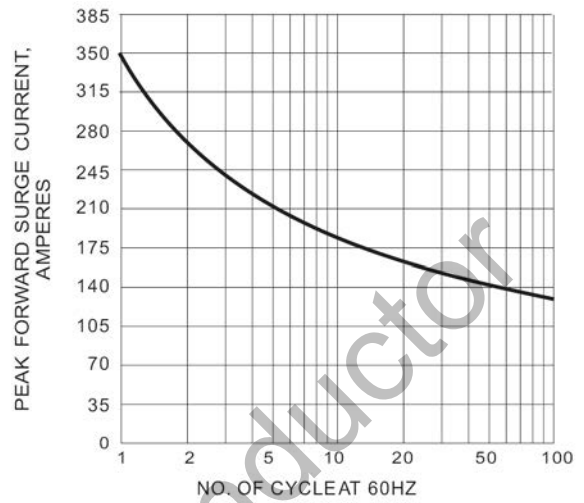


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

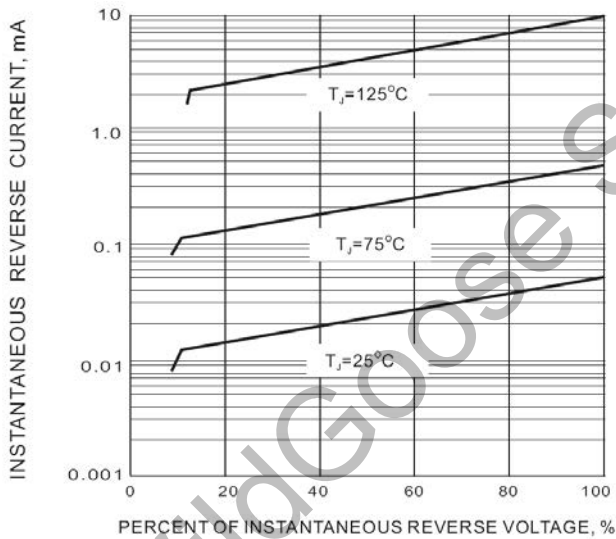


Fig 3. TYPICAL REVERSE CHARACTERISTIC

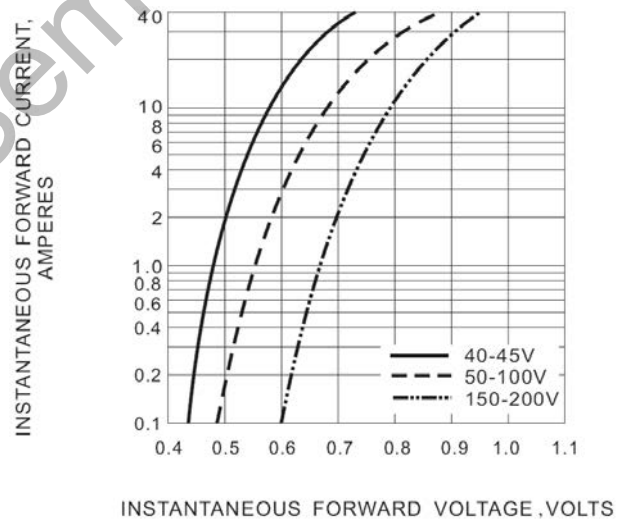


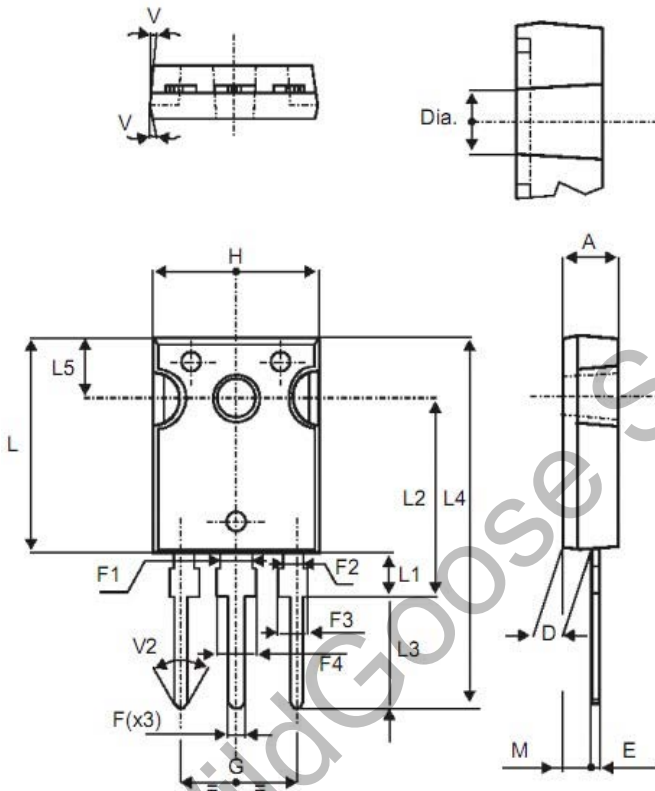
Fig 4. TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

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40A SCHOTTKY BARRIER RECTIFIER

**Package Dimension**

Units: mm

TO-247



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.85		5.15	0.191		0.203
D	2.20		2.60	0.086		0.102
E	0.40		0.80	0.015		0.031
F	1.00		1.40	0.039		0.055
F1		3.00			0.118	
F2		2.00			0.078	
F3	2.00		2.40	0.078		0.094
F4	3.00		3.40	0.118		0.133
G		10.90			0.429	
H	15.45		15.75	0.608		0.620
L	19.85		20.15	0.781		0.793
L1	3.70		4.30	0.145		0.169
L2		18.50			0.728	
L3	14.20		14.80	0.559		0.582
L4		34.60			1.362	
L5		5.50			0.216	
M	2.00		3.00	0.078		0.118
V		5°			5°	
V2		60°			60°	
Dia.	3.55		3.65	0.139		0.143

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