



MBR4040PT-MBR40200PT Schottky Barrier Rectifiers

Reverse Voltage Range: 40-200Volts

Forward Current:40.0Amperes



Features

- ◇ High surge capacity
- ◇ Metal silicon junction,majority carrier conduction.
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Low forward voltage drop.
- ◇ Guard ring for over voltage protection.
- ◇ Lead free finish ,Rohs and WEEE compliant.

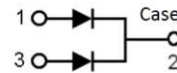
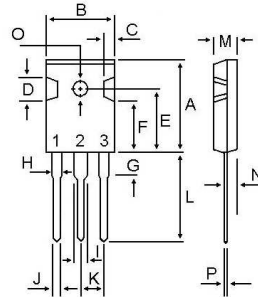
Applications

- ◇ Switching diode
- ◇ Switching mode power supply(SMPS)
- ◇ DC/DC converter
- ◇ LED lighting
- ◇ Adapter for notebook and game station
- ◇ For use in low voltage,high frequency inverters,
- ◇ Free wheeling,and polarity protection applications.

Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;
Molding compound meet UL Flammability
ClassificationRating 94V-0
- ◇ Position:Any
- ◇ Weight:5.60 grams.
- ◇ Case:JEDEC TO-247

TO-247



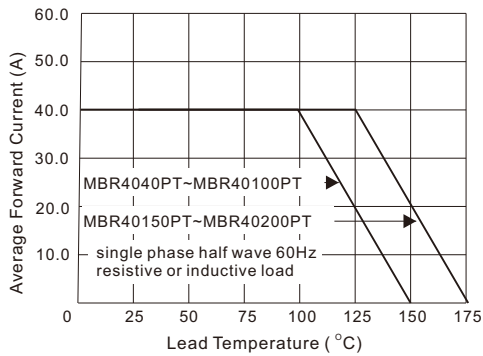
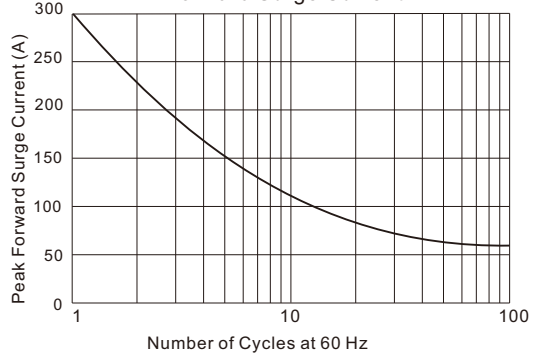
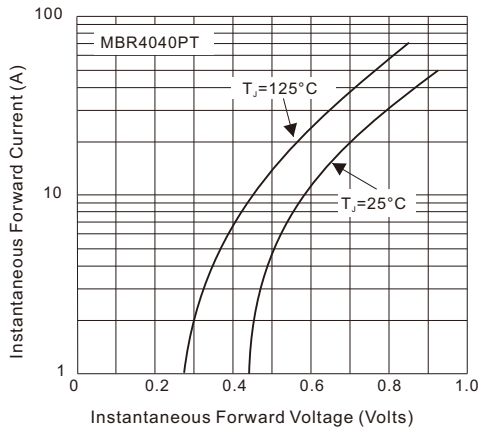
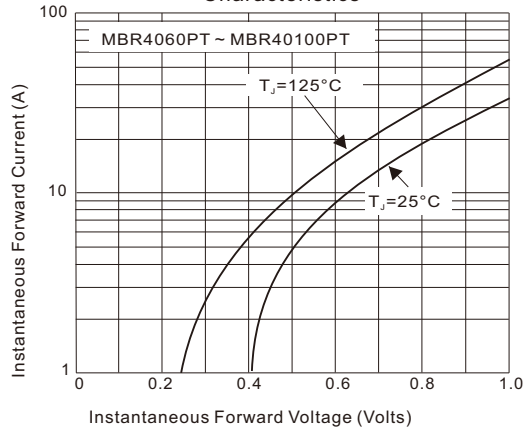
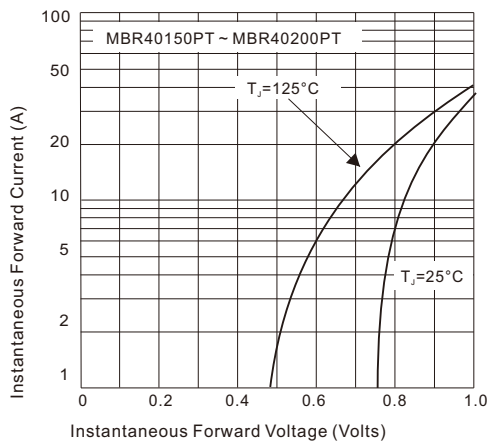
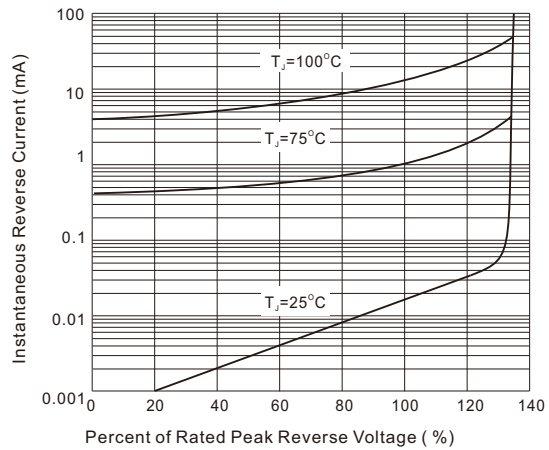
DIM	MILLIMETERS	
	MIN	MAX
A	20.80	21.80
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	3.75	4.35
H	1.90	2.30
I	2.90	3.30
J	1.00	1.40
K	5.26	5.66
L	19.50	20.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.48	0.72

MAXIMUM RATING

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%.

PARAMETER	SYMBOL	MBR 4040PT	MBR 4045PT	MBR 4050PT	MBR 4060PT	MBR 4080PT	MBR 4090PT	MBR 40100PT	MBR 40150PT	MBR 40200PT	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	50	60	80	90	100	150	200	V	
Maximum RMS voltage	V_{RWS}	28	31.5	35	42	56	63	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	40	45	50	60	80	90	100	150	200	V	
Maximum average forward rectified current (per leg) Total diode	$I_{F(AV)}$	20 40									A	
Peak forward surge current 8.3ms half-sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	300									A	
I^2t Rating for Fusing($t < 8.3ms$)	I^2t	373.5									A ² s	
Maximun Forward Voltage at 20A,per leg, $T_J=25^\circ C$	V_F	0.70		0.80		0.85		0.95			V	
Maximun DC Reverse current at Rated DC Blocking Voltage	$T_J=25^\circ C$	I_R				100		10			μA	
	$T_J=125^\circ C$	I_R				20		10			mA	
Typical Thermal Resistance	$R_{\theta JC}$	4.6									$^\circ C/W$	
Typical junction capacitance: $V_R=4.0v,f=1MHz$	C_J	150									pF	
Junction temperature	T_J	150					175					$^\circ C$
Storage temperature range	TSTG	-55~150					-55~175					$^\circ C$


RATING AND CHARACTERISTICS CURVES
Fig.1 - Forward Current Derating Curve

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

Fig. 3A - Instantaneous Forward Characteristics

Fig. 3B - Instantaneous Forward Characteristics

Fig. 3C - Instantaneous Forward Characteristics

Fig. 4 - Reverse Characteristics


Package	Packing	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton Size L×W×H(mm)	Quantity(pcs/carton)
TO-247	30pcs/Tube	540×195×55	600	550×410×130	2400