

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Low Power Loss, High Efficiency
- High Surge Capacity and High Current Capability
- High Junction Temperature Capability

20 Amp Schottky Barrier Rectifier 200 Volts

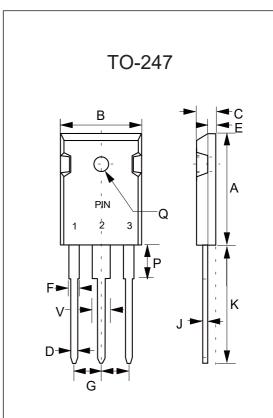
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V _{RWM}	200	V
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{RMS}	140	V
Average Rectified Forward Current			
Per Diode Per Device	I _{F(AV)}	10 20	А
Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave(Per Diode)	I _{FSM}	250	А
Current Squared Time @ 1ms≤t≤8.3ms(Per Diode)	I ² t	259	A ² s

Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1&3	Anode		
2	Cathode	MCC	PIN 1 ○ PIN 2
		MBR20200PT	PIN 3 o Case
		1111	

Note :1. High temperature solder exemption applied, see EU directive annex 7a.



DIMENSIONS						
DIM	INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOTE	
Α	0.787	0.866	20.00	22.00		
В	0.598	0.638	15.20	16.20		
С	0.185	0.208	4.70	5.30		
D	0.035	0.059	0.90	1.50		
E	0.059	0.094	1.50	2.40		
F	0.067	0.091	1.70	2.30		
J	0.019	0.031	0.48	0.80		
K	0.748	0.833	19.00	21.15		
Р	0.122	0.189	3.10	4.80		
Q	0.118	0.150	3.00	3.80	Ф	
V	0.106	0.134	2.70	3.40		
G	0.197	0.224	5.00	5.70		



Thermal characteristics

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
TJ	Operating Junction Temperature Range		-55		175	°C
T _{stg}	Storage Temperature Range		-55		175	°C
Rth _(J-C)	Thermal Resistance from Junction to Case	Per Diode		1.38	1.8	°C/W
Rth _(J-C)	Thermal Resistance from Junction to Case	Per Device			1.0	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Тур	Max	Unit
Forward Voltage	V _F	I _F =10A;T _J =25°C		0.85	0.90	V
		I _F =10A;T _J =125°C			0.80	v
Reverse Current	I _R	V _R =200V;T _J =25°C			10	۸
		V _R =200V;T _J =125°C			1000	μA
Junction Capacitance	CJ	V _R =4V;f=1MHz;T _J =25°C		110		pF



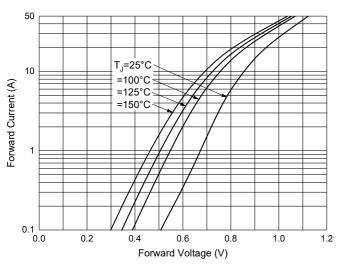
Curve Characteristics

Fig. 1 - Forward Current Derating Curve 25 20 Average Forward Current (A) 15 10 5 25 50 75 100 125 150 175 Case Temperature (°C)

300 250 Peak Forward Surge Current (A) 200 150 100 50 8.3 ms Single Half Sine-Wave 100 Number of Cycles at 60 Hz

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

Fig. 3 - Typical Forward Characteristics



10³ T_{.1}=150°C 10² T_J=125°C Reverse Current (µA) 10¹ T₁=100°C 10⁰ 10- $T_J=25^{\circ}C$ 10⁻² 20

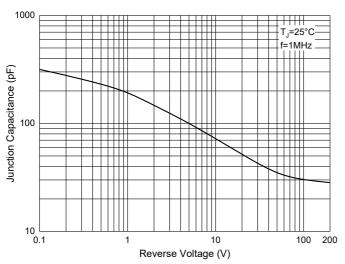
60

Percent of Rated Peak Reverse Voltage (%)

100

Fig. 4 - Typical Reverse Leakage Characteristics

Fig. 5 - Typical Capacitance Characteristics





Ordering Information

Device	Packing		
MBR20200PT-BP	Bulk:30pcs/Tube,360pcs/Box,1.8Kpcs/Carton		

Note: Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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