



Micro Commercial Components  
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# MBR20150CT

## Features

- High Junction Temperature Capability
- Good Trade Off Between Leakage Current And Forward Voltage Drop
- Low Leakage Current

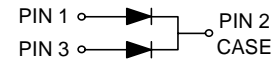
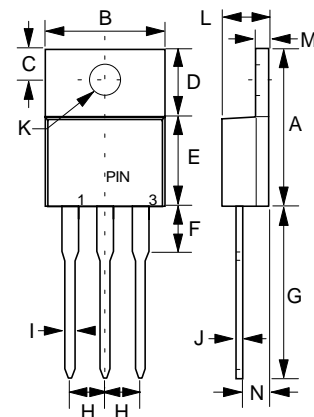
**20 Amp High Voltage  
 Power Schottky  
 Barrier Rectifier  
 150Volts**

## Maximum Ratings

- Operating Junction Temperature : 150°C
- Storage Temperature: - 50°C to +150°C
- Per diode Thermal Resistance 2.2°C/W Junction to Case
- Total Thermal Resistance 1.3°C/W Junction to Case

MCC Catalog Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR 20150 CT	150 V	105V	150 V

## TO-220AB



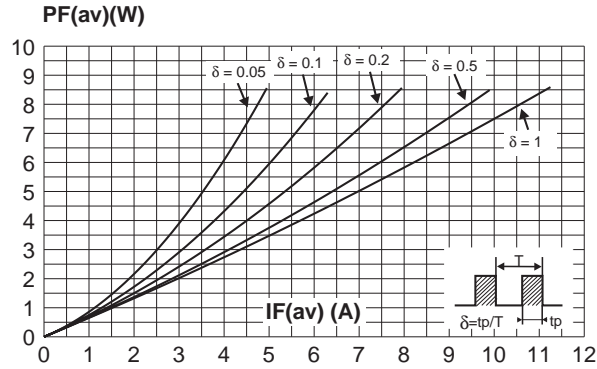
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	20 A	$T_C = 155^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	180A	8.3ms, half sine wave
Maximum Instantaneous Forward Voltage MBR20150CT	$V_F$	.92V	$I_{FM} = 10A$ $T_J = 25^\circ\text{C}$
	$V_F$	.75V	$I_{FM} = 10A$ $T_J = 125^\circ\text{C}$
Maximum Reverse Current At Rated DC Blocking Voltage	$I_R$	25 $\mu$ A 5m A	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$

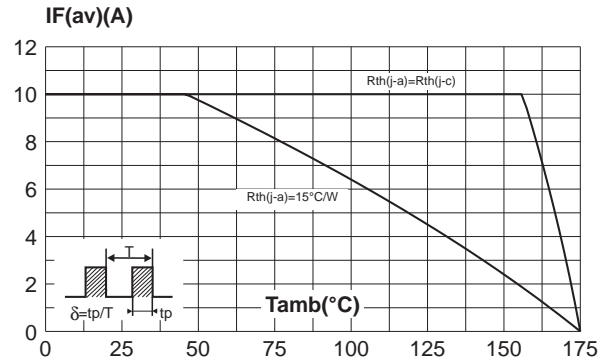
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.600	.620	15.25	15.75	
B	.393	.409	10.00	10.40	
C	.104	.116	2.65	2.95	
D	.244	.259	6.20	6.60	
E	.356	.361	9.05	9.15	
F	.137	.154	3.50	3.93	
G	.511	.551	13.00	14.00	
H	.094	.106	2.40	2.70	
I	.024	.034	0.61	0.88	
J	.019	.027	0.49	0.70	
K	.147	.151	3.75	3.85	∅
L	.173	.181	4.40	4.60	
M	.048	.051	1.23	1.32	
N	0.102 typ.		2.6typ.		

\*Pulse Test: Pulse Width 380 $\mu$ sec, Duty Cycle 2%

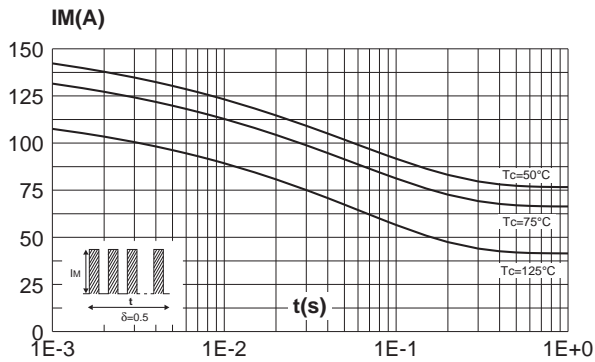
**Fig. 1:** Average forward power dissipation versus average forward current (per diode).



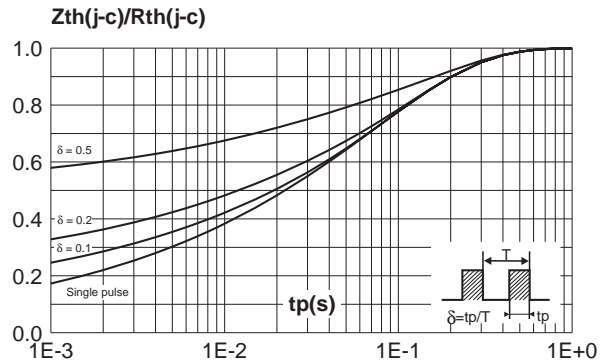
**Fig. 2:** Average forward current versus ambient temperature ( $\delta = 0.5$ , per diode).



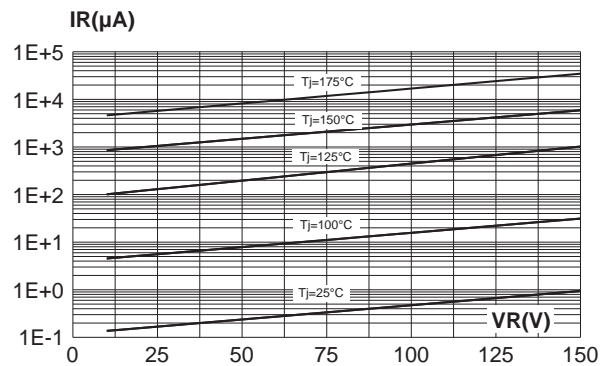
**Fig. 3:** Non repetitive surge peak forward current versus overload duration (maximum values, per diode).



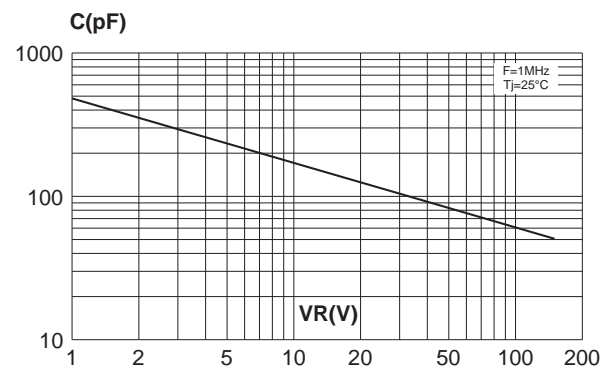
**Fig. 4:** Relative variation of thermal impedance junction to case versus pulse duration (per diode).



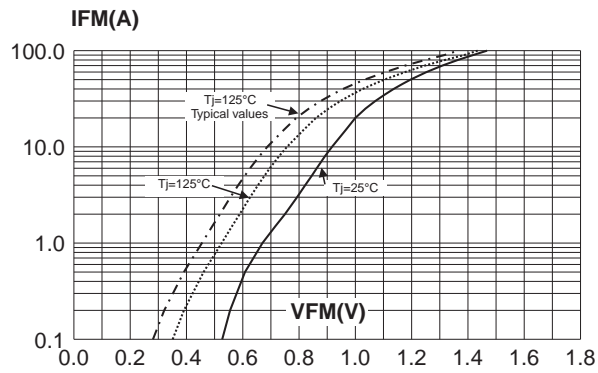
**Fig. 5:** Reverse leakage current versus reverse voltage applied (typical values, per diode).



**Fig. 6:** Junction capacitance versus reverse voltage applied (typical values, per diode).



**Fig. 7:** Forward voltage drop versus forward current (maximum values, per diode).



**Fig. 8:** Thermal resistance junction to ambient versus copper surface under tab (Epoxy printed circuit board, copper thickness:  $35\mu\text{m}$ ) (STPS20150CG only).

