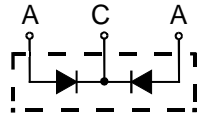


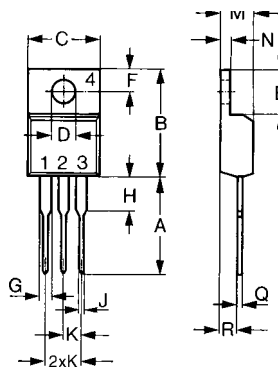
# MBR20150CT thru MBR20200CT

## High T<sub>jm</sub> Low IRRM Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	12.70	13.97	0.500	0.550
B	14.73	16.00	0.580	0.630
C	9.91	10.66	0.390	0.420
D	3.54	4.08	0.139	0.161
E	5.85	6.85	0.230	0.270
F	2.54	3.18	0.100	0.125
G	1.15	1.65	0.045	0.065
H	2.79	5.84	0.110	0.230
J	0.64	1.01	0.025	0.040
K	2.54	BSC	0.100	BSC
M	4.32	4.82	0.170	0.190
N	1.14	1.39	0.045	0.055
Q	0.38	0.56	0.015	0.022
R	2.29	2.79	0.090	0.110

	V <sub>RSM</sub> V	V <sub>RRM</sub> V
MBR20150CT	150	150
MBR20200CT	200	200

Symbol	Test Conditions	Maximum Ratings	Unit
I <sub>RMS</sub>		20	
I <sub>FAV</sub>	T <sub>C</sub> =125°C; rectangular, d=0.5	10	A
I <sub>FAV</sub>	T <sub>C</sub> =125°C; rectangular, d=0.5; per device	20	
I <sub>FSM</sub>	T <sub>VJ</sub> =45°C; t <sub>p</sub> =10ms (50Hz), sine	150	A
I <sub>AR</sub>	V <sub>A</sub> =1.5·V <sub>RRM</sub> typ.; f=10kHz; repetitive	0.8	A
(dv/dt) <sub>cr</sub>		10000	V/us
T <sub>VJ</sub>		-65...+150	°C
T <sub>VJM</sub>		150	
T <sub>stg</sub>		-65...+175	
M <sub>d</sub>	mounting torque	0.4...0.6	Nm
Weight	typical	2	g

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I <sub>R</sub>	T <sub>VJ</sub> =25°C; V <sub>R</sub> =V <sub>RRM</sub> T <sub>VJ</sub> =125°C; V <sub>R</sub> =V <sub>RRM</sub>		1.0 50	mA
V <sub>F</sub>	I <sub>F</sub> =10A; T <sub>VJ</sub> =125°C I <sub>F</sub> =10A; T <sub>VJ</sub> =25°C I <sub>F</sub> =20A; T <sub>VJ</sub> =125°C I <sub>F</sub> =20A; T <sub>VJ</sub> =25°C		0.80 0.90 0.90 1.00	V
R <sub>thJC</sub>			2.0	K/W

### FEATURES

- \* International standard package
- \* Very low V<sub>F</sub>
- \* Extremely low switching losses
- \* Low I<sub>RM</sub>-values
- \* RoHS compliant

### APPLICATIONS

- \* Rectifiers in switch mode power supplies (SMPS)
- \* Free wheeling diode in low voltage converters

### ADVANTAGES

- \* High reliability circuit operation
- \* Low voltage peaks for reduced protection circuits
- \* Low noise switching
- \* Low losses



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## High $T_{jm}$ Low IRRM Schottky Barrier Diodes

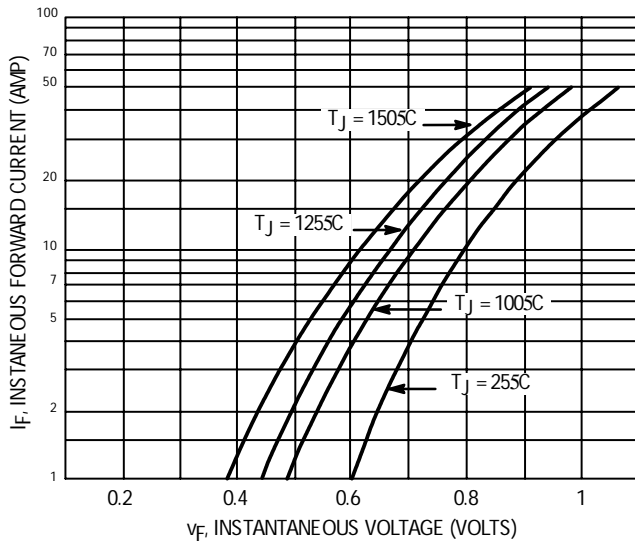


Figure 1. Typical Forward Voltage (Per Leg)

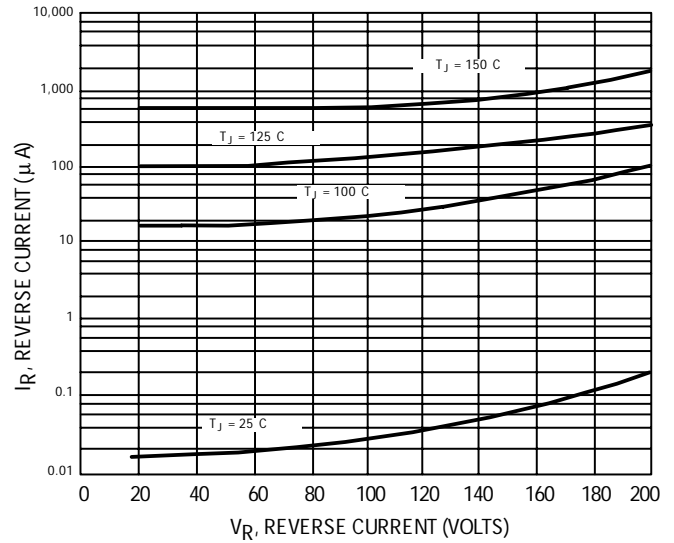


Figure 2. Typical Reverse Current (Per Leg)

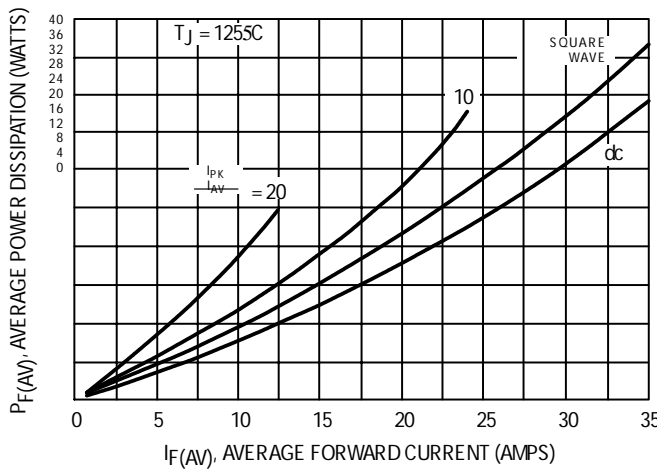


Figure 3. Forward Power Dissipation

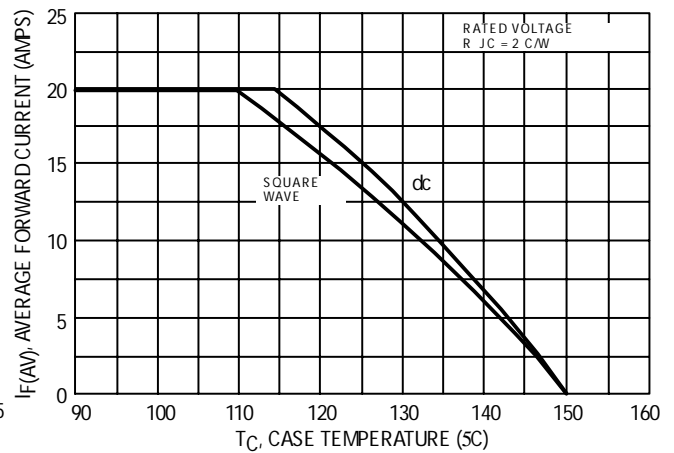


Figure 4. Current Derating, Case

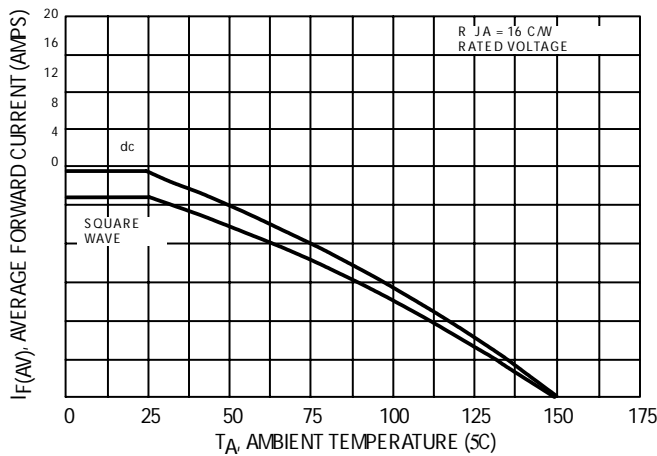


Figure 5. Current Derating, Ambient

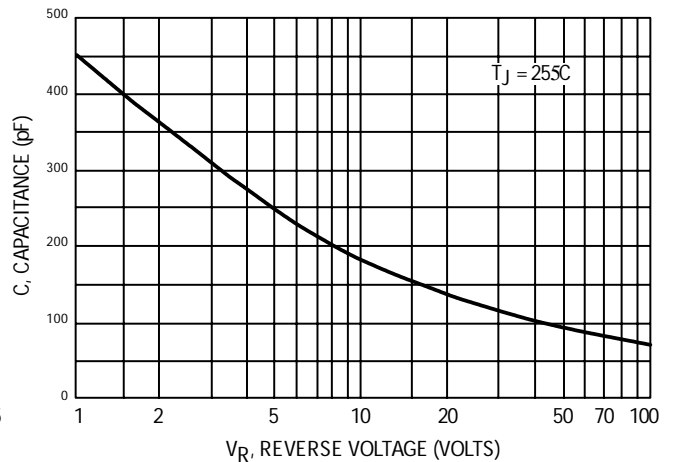


Figure 6. Typical Capacitance (Per Leg)

