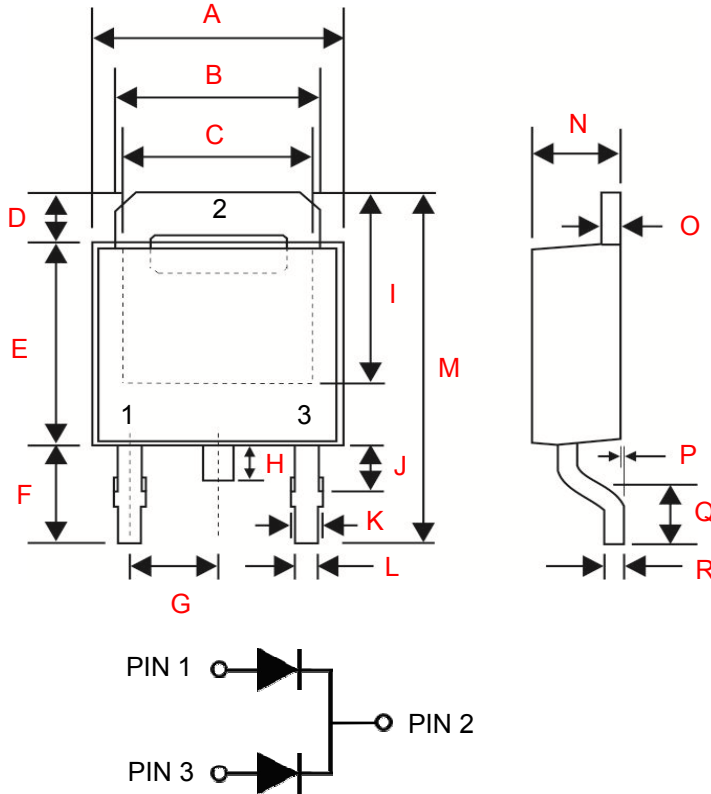


High Power Schottky Barrier Rectifier

Package Outline Dimensions (millimeters)



TO-252 (DPAK)		
Dim.	Min.	Max.
A	6.35	6.73
B	5.21	5.46
C	4.32	----
D	0.89	1.27
E	5.97	6.22
F	2.63 REF	
G	2.29 BSC	
H	0.64	1.02
I	5.21	----
J	1.15	1.52
K	0.71	1.14
L	0.64	0.88
M	9.40	10.42
N	2.19	2.38
O	0.46	0.58
P	0.00	0.13
Q	1.39	1.65
R	0.508 BSC	
All Dimensions in millimeter		

Features

- High Current Capability
- Low Switching Noise
- High Surge Capability
- Low Power Loss & High Efficiency
- Guard Ring Protection
- Pd-free lead plating & Halogen-free part

Mechanical

- Molded Plastic Low profile TO-252 (DPAK)
- Plastic materials used carries underwriters laboratory flammability classification 94V-0
- Lead Temperature for Soldering Purposes : 265°C Max. for 10 Seconds
- Device Weight : Approximated 0.34 grams

Maximum Ratings & Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	MBRD 20100CT	MBRD 20150CT	MBRD 20200CT	Units
DC Blocking Voltage	V_{RM}	100	150	200	Volts
Working Peak Reverse Voltage	V_{RWM}	70	105	140	
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	
Average Rectified Output Current (Total Device)	I_O	20			Amps
Non-Repetitive Peak Forward Surge Current (Per Leg) (Surge applied at rated load conditions half wave, single phase, 60Hz)	I_{FSM}	150			Amps
Instantaneous Forward Voltage (Per Leg) $I_F = 10A, T_A = 25^\circ\text{C}$	V_F	0.85	0.87	0.9	Volts
Instantaneous Reverse Current (Per Leg) $V_R = V_{RRM}, T_A = 25^\circ\text{C}$ $V_R = V_{RRM}, T_A = 125^\circ\text{C}$	I_R	0.1 10			mA

NOTE : 1.Test with 2inch Al board

Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified) (Per Leg)

Parameter	Symbol	Value	Units
Maximum Thermal Resistance Junction to Ambient	$R\theta_{JA}$	22.0	$^\circ\text{C} / \text{W}$
Operating & Storage Junction Temperature	T_J	150	$^\circ\text{C}$
	T_{STG}	- 65 to +150	

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

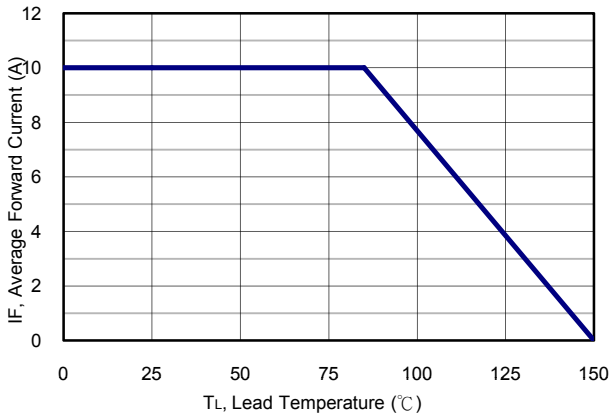


Figure 1: Current Derating Curves (Per Leg)

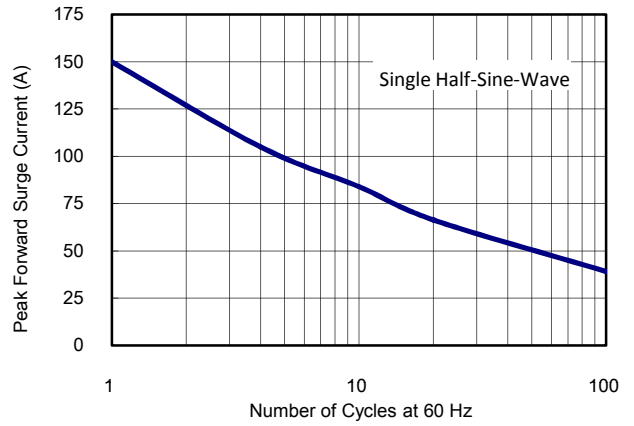


Figure 2: Peak Forward Surge Current (Per Leg)

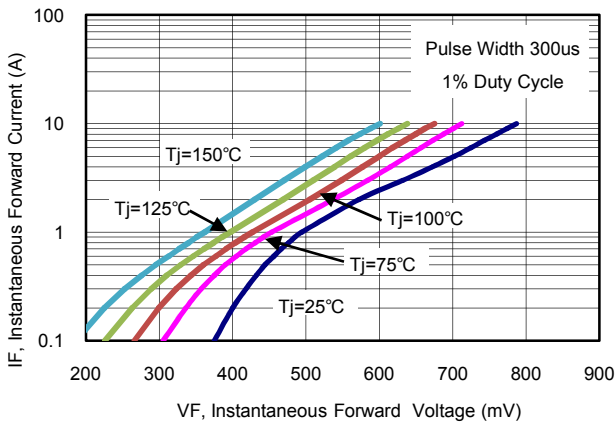


Figure 3: Typical Forward Characteristics (MBRD20100CT) (Per Leg)

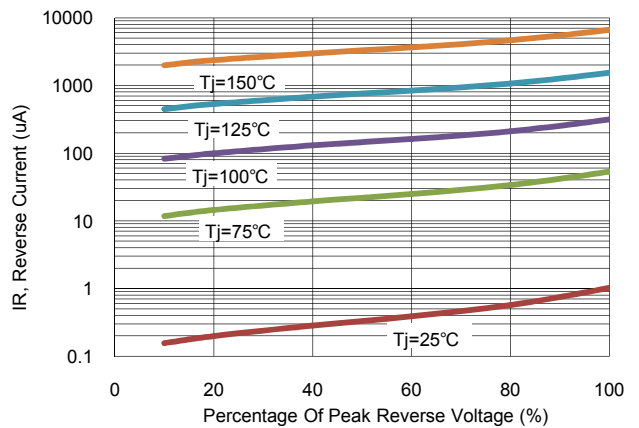


Figure 4: Typical Reverse Characteristics (MBRD20100CT) (Per Leg)

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

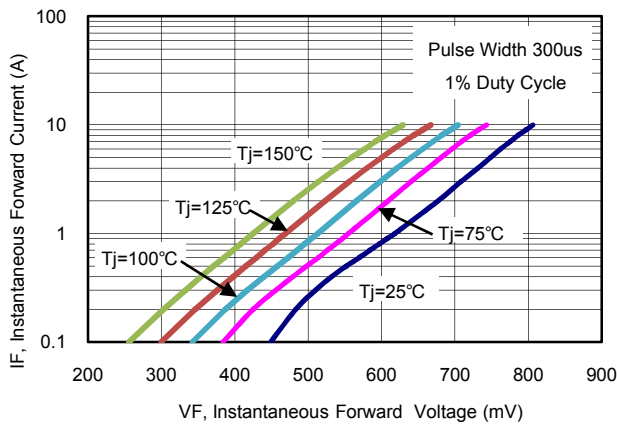


Figure 5: Typical Forward Characteristics (MBRD20150CT) (Per Leg)

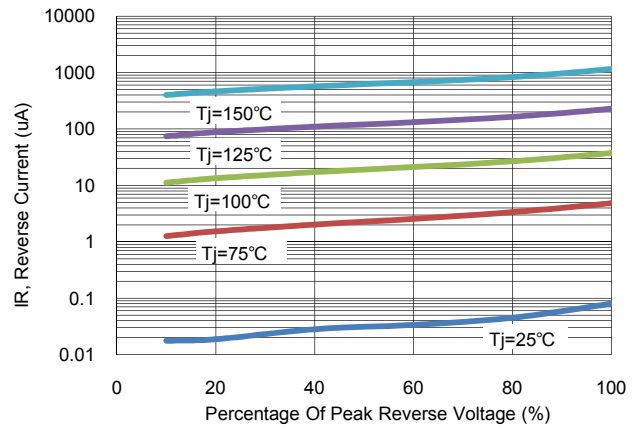


Figure 6: Typical Reverse Characteristics (MBRD20150CT) (Per Leg)

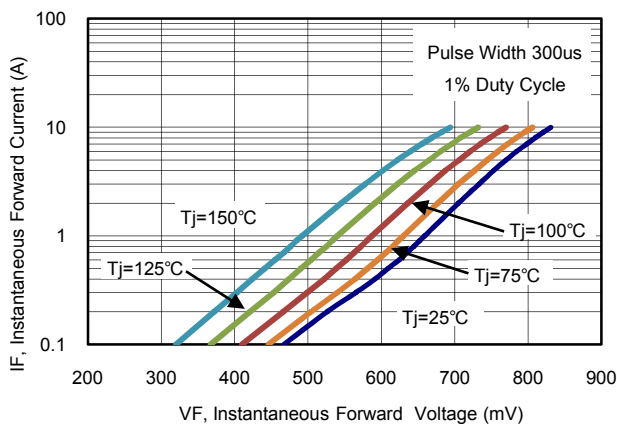


Figure 7: Typical Forward Characteristics (MBRD20200CT) (Per Leg)

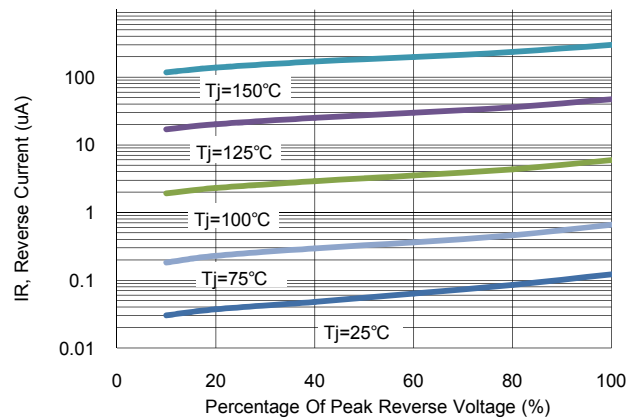
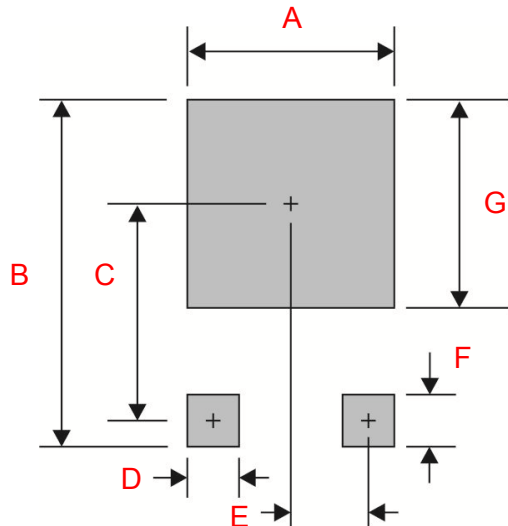


Figure 8: Typical Reverse Characteristics (MBRD20200CT) (Per Leg)

Suggested Pad Layout


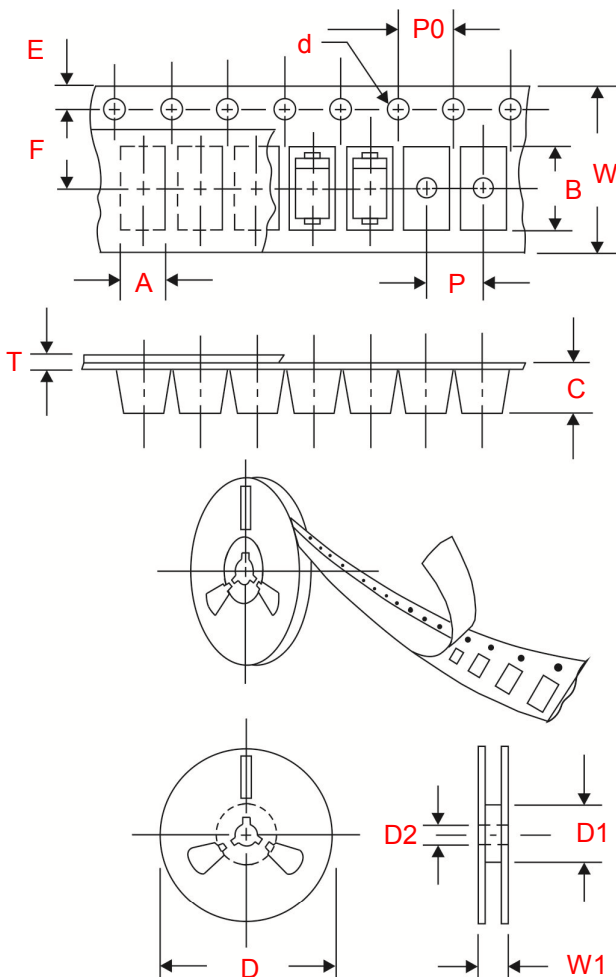
TO-252 (DPAK)	
Symbol	Dimensions
A	7.00
B	11.60
C	6.90
D	1.50
E	2.30
F	2.50
G	7.00
All Dimensions in millimeter	

Ordering information

Part Number	Package	Delivery mode
MBRD20100CT THRU MBRD20200CT	TO-252 (DPAK)	2,500 pieces / 13" Reel

Tape and Reel Dimensions (millimeters)

Surface Mount Device are packed in accordance with EIA standard RS-481-D and specification.



Item	Symbol	Dimensions (mm)
		TO-252 (DPAK)
Carrier width	A	6.9 ± 0.1
Carrier length	B	10.6 ± 0.1
Carrier depth	C	2.65 ± 0.1
Sprocket hole	d	1.55 ± 0.1
Reel outside diameter	D	330.0 ± 1.0
Reel inner diameter	D1	102.0 ± 1.0
Feed hole diameter	D2	13.0 ± 1.0
Stocket hole position	E	1.75 ± 0.1
Punch hole position	F	7.5 ± 0.1
Punch hole pitch	P	8.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Totall tape thickness	T	0.3 ± 0.1
Tape width	W	16.0 ± 0.3
Reel width	W1	11.1 ± 1.5

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