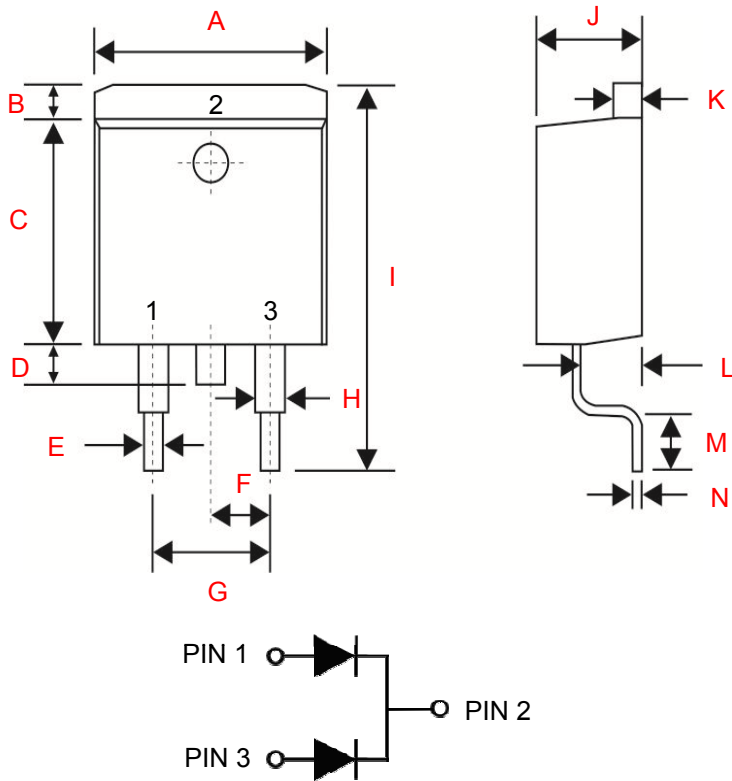


## High Power Schottky Barrier Rectifier

### Package Outline Dimensions ( millimeters )



TO-263 (D <sup>2</sup> PAK)		
Dim.	Min.	Max.
A	10.01	10.31
B	1.27	1.40
C	8.76	9.02
D	1.30	1.75
E	0.71	0.91
F	2.54 BSC	
G	4.98	5.18
H	1.17	1.37
I	15.00	15.85
J	4.47	4.67
K	1.17	1.37
L	2.52	2.82
M	2.29	2.79
N	0.28	0.48
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-263 (D<sup>2</sup>PAK)
- Plastic materials used carries underwriters laboratory flammability classification 94V-0
- Lead Temperature for Soldering Purposes : 265°C Max. for 10 Seconds
- Device Weight : Approximated 1.70 grams

### Maximum Ratings & Electrical Characteristics ( T<sub>A</sub> = 25°C unless otherwise specified )

Parameter	Symbol	MBRB 1040CT	MBRB 1060CT	Units	
DC Blocking Voltage	V <sub>RM</sub>	40	60		
Working Peak Reverse Voltage	V <sub>RWM</sub>	28	42	Volts	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	60		
Average Rectified Output Current (Total Device)	I <sub>O</sub>	10		Amps	
Non-Repetitive Peak Forward Surge Current (Per Leg) (Surge applied at rated load conditions half wave, single phase, 60Hz)	I <sub>FSM</sub>	125		Amps	
Instantaneous Forward Voltage (Per Leg)	V <sub>F</sub>	I <sub>F</sub> = 5A , T <sub>A</sub> = 25°C I <sub>F</sub> = 5A , T <sub>A</sub> = 125°C	0.65 0.55	0.75 0.65	Volts
Instantaneous Reverse Current (Per Leg)	I <sub>R</sub>	V <sub>R</sub> = V <sub>RRM</sub> , T <sub>A</sub> = 25°C V <sub>R</sub> = V <sub>RRM</sub> , T <sub>A</sub> = 125°C	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 Case	$R\theta_{JC}$	5.0	$^\circ\text{C} / \text{W}$
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 )

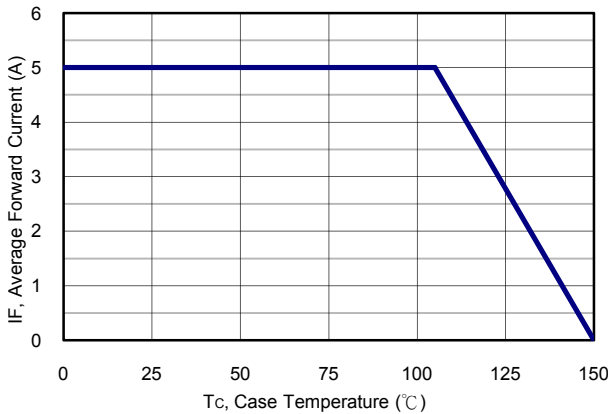


Figure 1: Current Derating Curves (Per Leg)

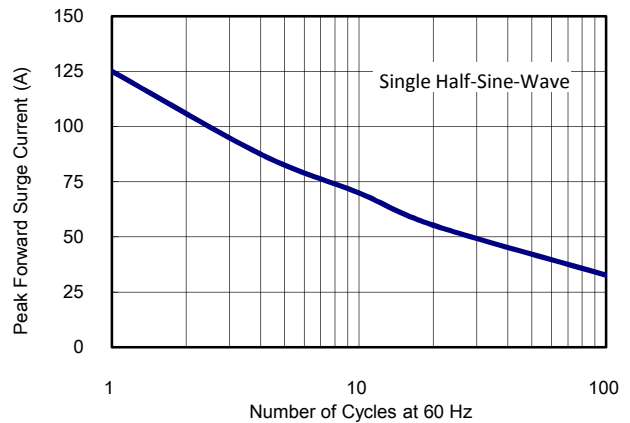


Figure 2: Peak Forward Surge Current (Per Leg)

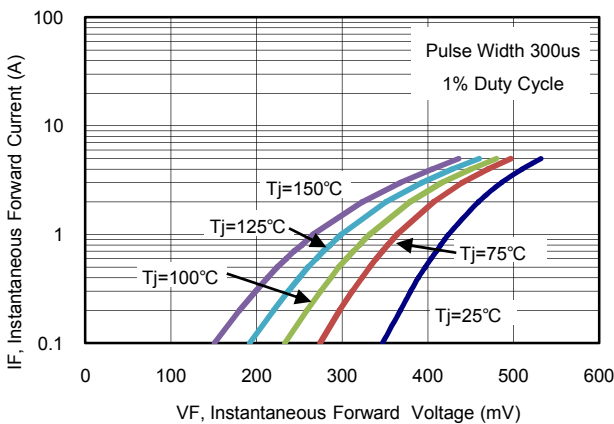


Figure 3: Typical Forward Characteristics (MBRB1040CT) (Per Leg)

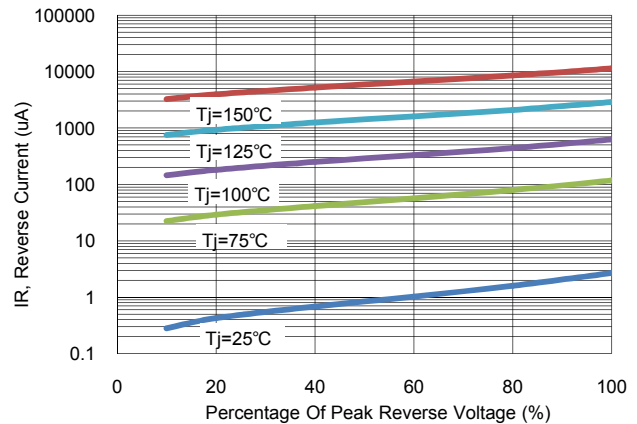


Figure 4: Typical Reverse Characteristics (MBRB1040CT) (Per Leg)

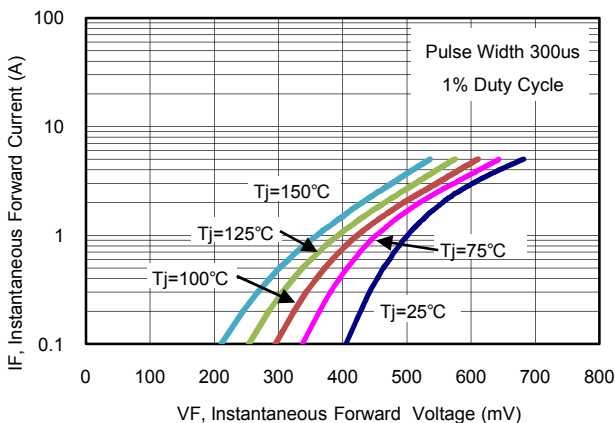


Figure 5: Typical Forward Characteristics (MBRB1060CT) (Per Leg)

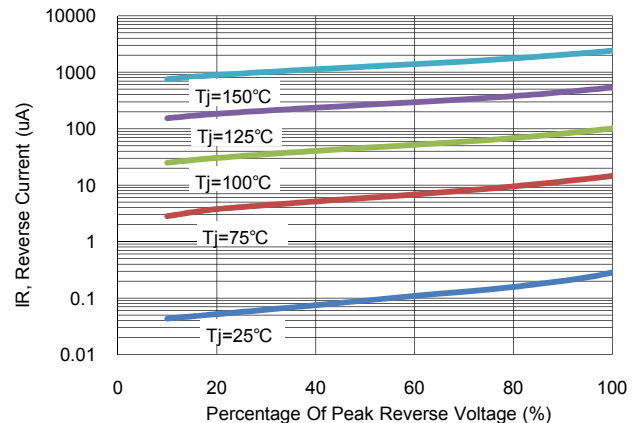
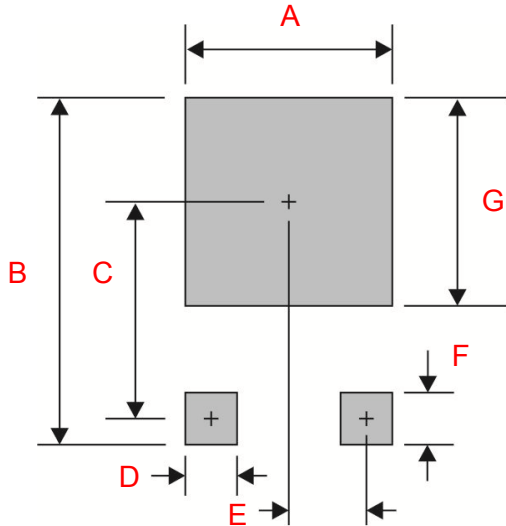


Figure 6: Typical Reverse Characteristics (MBRB1060CT) (Per Leg)

**Suggested Pad Layout**


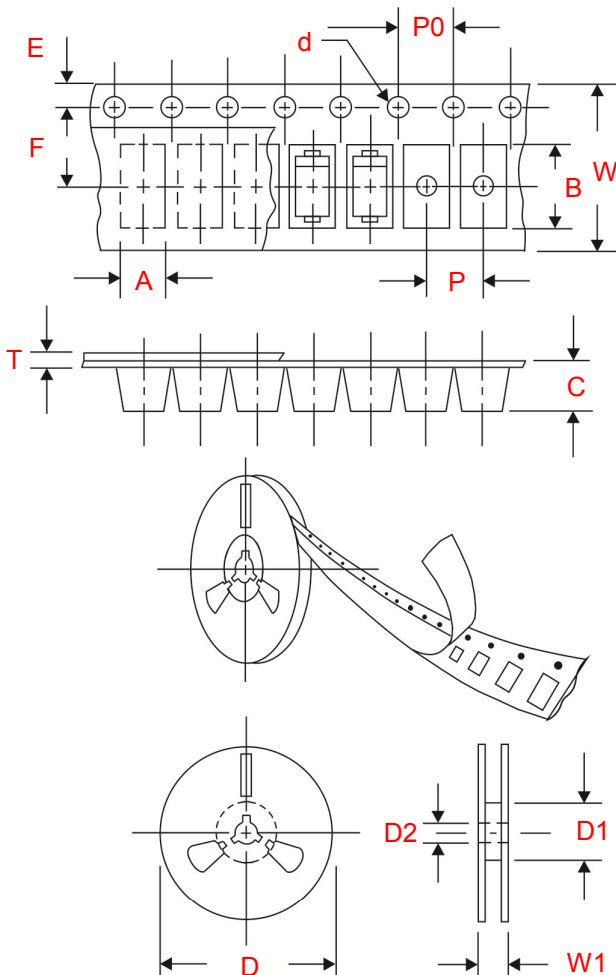
TO-263 (D2PAK)	
Symbol	Dimensions
A	10.80
B	16.90
C	9.50
D	1.80
E	2.50
F	3.50
G	11.40
All Dimensions in millimeter	

**Ordering information**

Part Number	Package	Delivery mode
MBRB1040CT / MBRB1060CT	TO-263 (D2PAK)	800 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-263 (D2PAK)
Carrier width	A	10.6 ± 0.1
Carrier length	B	15.8 ± 0.1
Carrier depth	C	4.9 ± 0.1
Sprocket hole	d	1.6 ± 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	11.5 ± 0.1
Punch hole pitch	P	16.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Total tape thickness	T	0.35 ± 0.1
Tape width	W	24.0 ± 0.3
Reel width	W1	19.1 ± 1.5

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