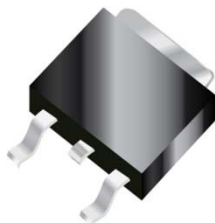




MBR40xxxCD2 SERIES



Schottky Barrier Rectifiers



D2-PAK

Primary Characteristics

I_F	40	A
V_{RRM}	40~200	V
I_{FSM}	200	A
$I_F=20A @ V_F$	0.70, 0.80, 0.85, 0.92	V
$T_J \text{ max}$	150, 175	°C

Features

- Low Power Loss, High Efficiency
- High Current Capability
- For Use in Low Voltage, High Frequency Inverters Free Wheeling, and Polarity Protection Applications

Mechanical Data

- Case : D2-PAK
- Case Material : Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals : Solder Plated, Solderable per MIL-STD-750, Method 2026

Ordering Information

Part No.	Remark	Package	Packing
MBR40xxxCD2	RoHS Compliant	D2-PAK	800 / Reel
MBR40xxxCD2-H	Halogen Free		

Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	MBR4040CD2	MBR4045CD2	MBR4050CD2	MBR4060CD2	MBR4080CD2	MBR4090CD2	MBR40100CD2	MBR40150CD2	MBR40200CD2	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	V _{RMS}	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Rectified Current (Total) (Per Leg)	I _F	40 20									A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	200									A
Maximum Forward Voltage IF=20A (Per Leg)	V _F	0.70		0.80		0.85			0.92		V
Maximum DC Reverse Current @ Tj=25°C at Rated DC Blocking Voltage @ Tj=125°C	I _R	0.1 20				0.05 20				mA	
Typical Thermal Resistance	R _{θJC}	2.2									°C/W
Operating Temperature Range	T _J	-55 to +150							-55 to +175		°C
Storage Temperature Range	T _{STG}	-55 to +150							-55 to +175		°C
Marking Code		MBR4040CD2	MBR4045CD2	MBR4050CD2	MBR4060CD2	MBR4080CD2	MBR4090CD2	MBR40100CD2	MBR40150CD2	MBR40200CD2	

NOTES :

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



Schottky Barrier Rectifiers

Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

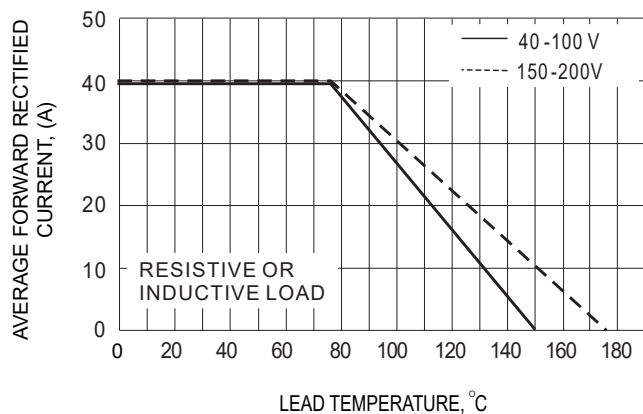


FIG. 2-Typical Forward Characteristics

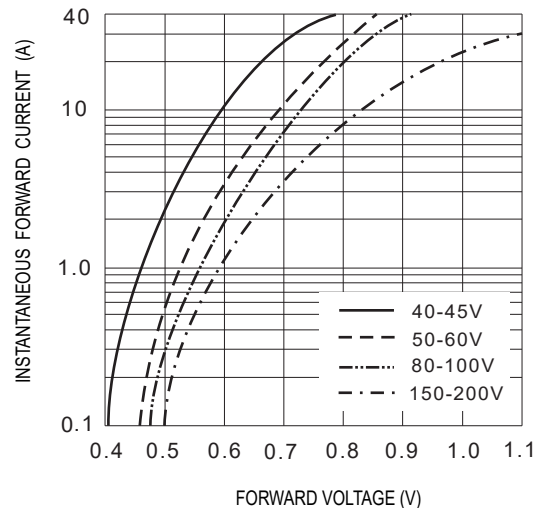


FIG. 3-Maximum Non-Repetitive Forward Surge Current

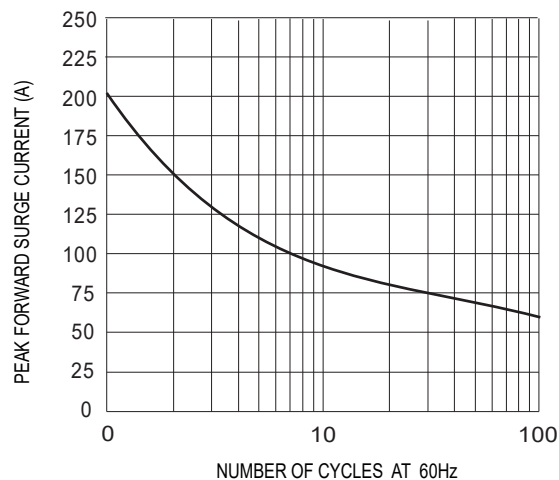
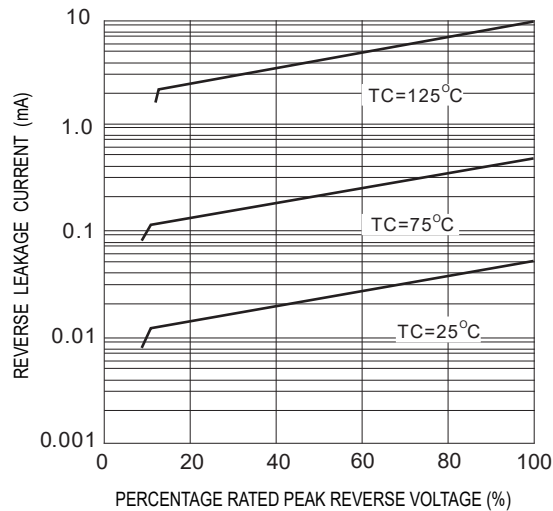
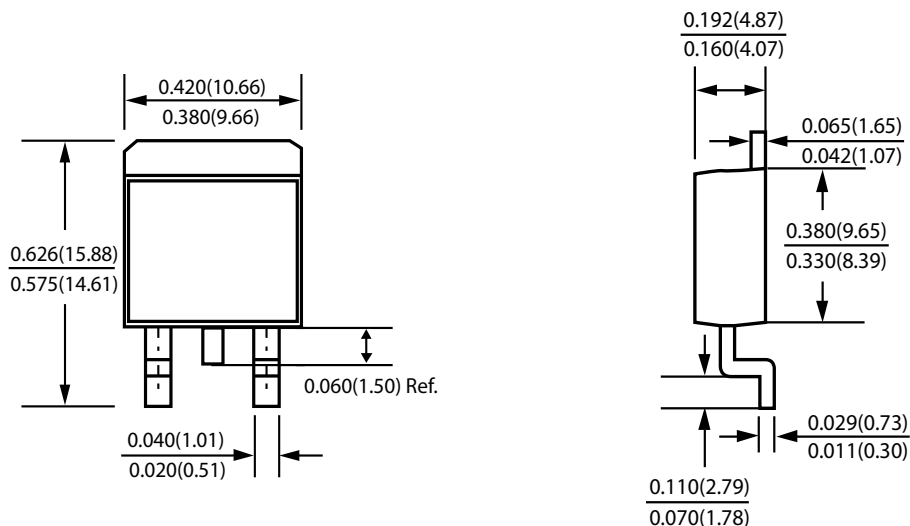


FIG. 4-Typical Reverse Characteristics





Package Outline Dimensions

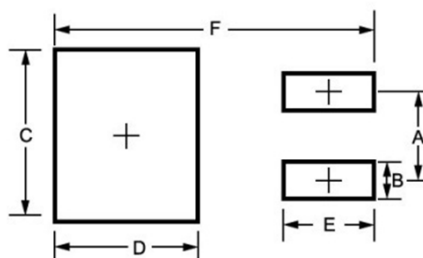


D2-PAK

Dimensions in inches and (millimeters)

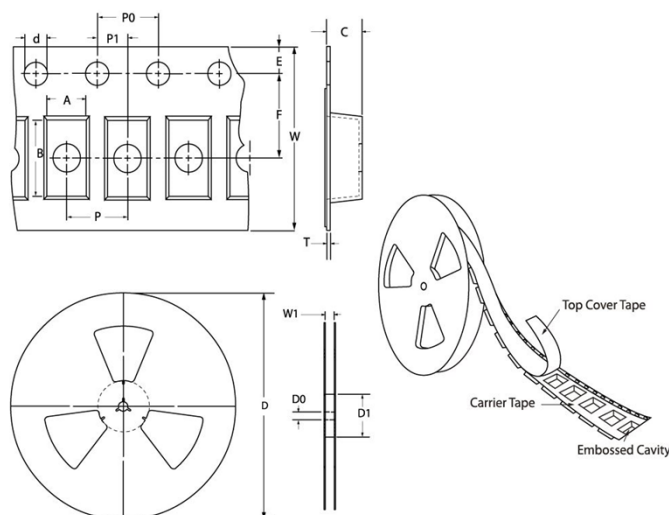
Suggested Pad Layout

Outline Dimension	D2-PAK (mm)
A	5.08
B	1.10
C	10.80
D	8.30
E	3.50
F	16.90



Tape & Reel Specification

Item	Symbol	D2-PAK (mm)
Carrier width	A	10.8 ± 0.1
Carrier length	B	16.2 ± 0.2
Carrier depth	C	5.2 ± 0.3
Sprocket hole	d	1.55 ± 0.05
Reel outside diameter	D	330 ± 2
Feed hole diameter	D0	13.5 ± 1
Reel inner diameter	D1	50 (min)
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	11.5 ± 0.1
Sprocket hole pitch	P	16.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.1
Overall tape thickness	T	0.305 ± 0.1
Tape width	W	24 ± 0.3
Reel width	W1	24.3 (max)





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