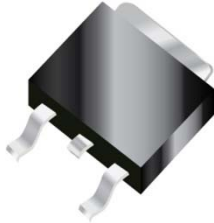




MBR40xxxCD2 SERIES



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	MBR40 40CD2	MBR40 45CD2	MBR40 50CD2	MBR40 60CD2	MBR40 80CD2	MBR40 90CD2	MBR4 0100C D2	MBR4 0150C D2	MBR4 0200C D2	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 $I_F=20A$ (Per Leg)	V_F	0.70	0.80		0.85		0.92				V	
Maximum DC Reverse Current @ $T_J=25^\circ C$ at Rated DC Blocking Voltage @ $T_J=125^\circ C$	I_R	0.1 20			0.05 20							mA
Typical Thermal Resistance	$R_{\theta JC}$	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		MBR40 40CD2	MBR40 45CD2	MBR40 50CD2	MBR40 60CD2	MBR40 80CD2	MBR40 90CD2	MBR4 0100C D2	MBR4 0150C D2	MBR4 0200C D2		

NOTES :

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



Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

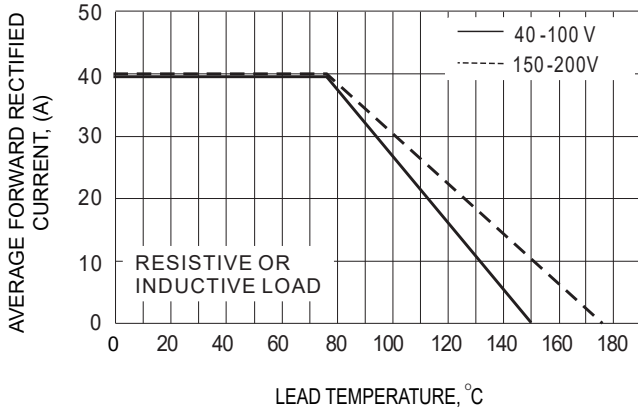


FIG. 2-Typical Forward Characteristics

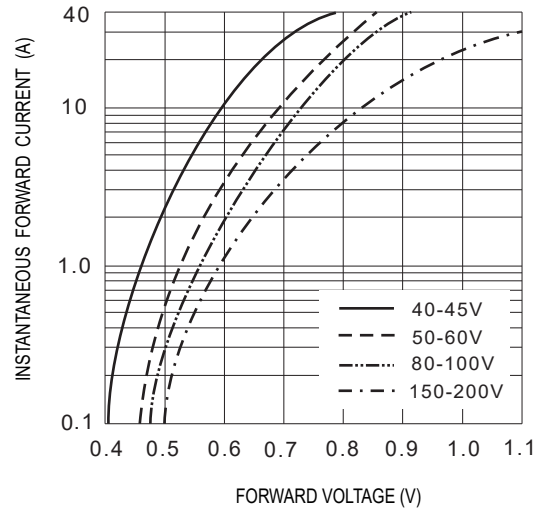


FIG. 3-Maximum Non-Repetitive Forward Surge Current

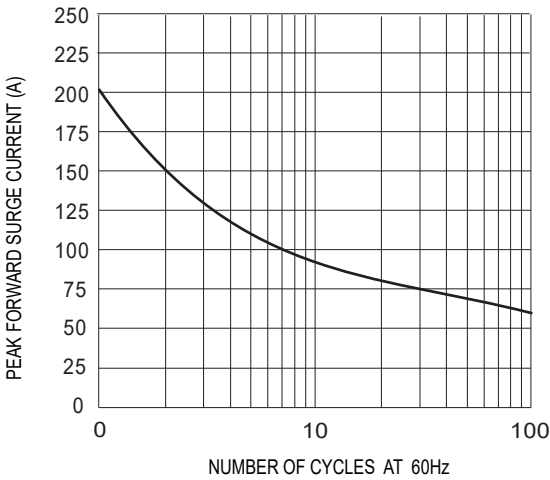
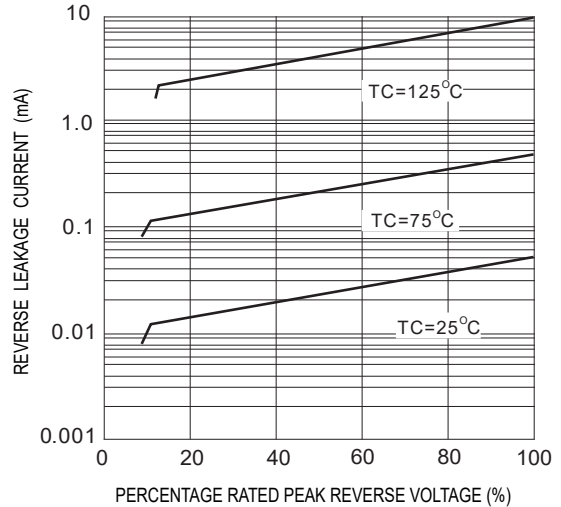
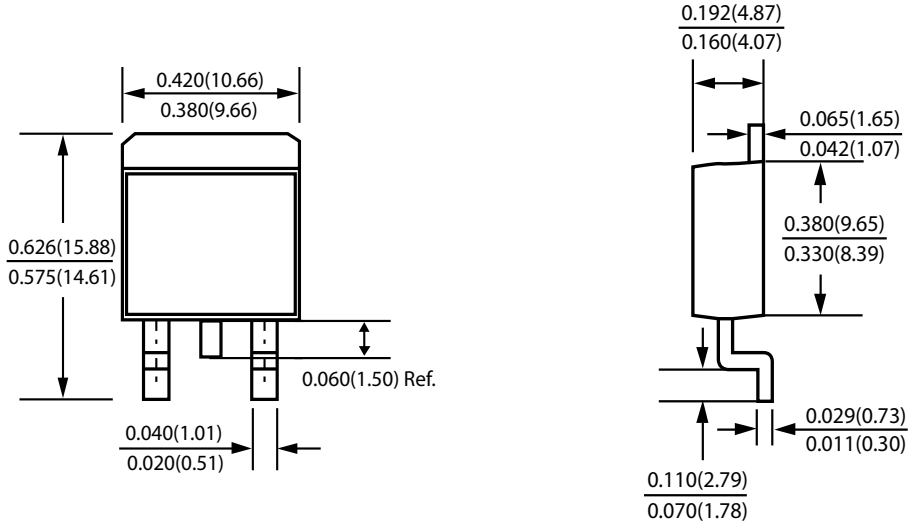


FIG. 4-Typical Reverse Characteristics





Package Outline Dimensions

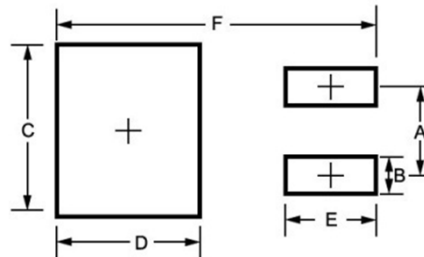


D2-PAK

Dimensions in inches and (millimeters)

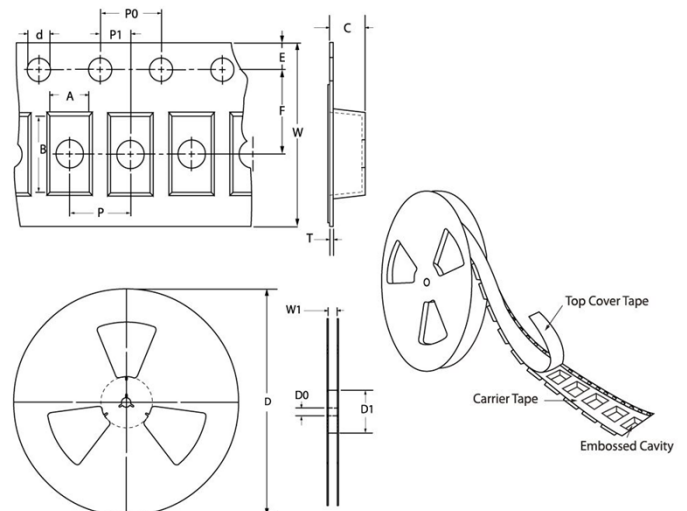
Suggested Pad Layout

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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