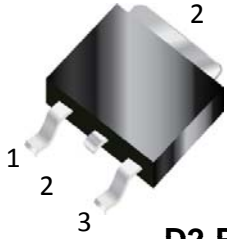




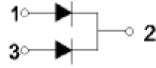
# MBR10xxxCD2 SERIES



## Schottky Barrier Rectifiers



**D2-PAK**



### Primary Characteristics

$I_F$	5	A
$V_{RRM}$	20~200	V
$I_{FSM}$	120, 130	A
$V_F$	0.6, 0.75, 0.85, 0.92	V
$T_J$ max	150, 175	°C

### Features

- Guard Ring for Over Voltage Protection
- Low Power Loss, High Efficiency
- High Current Capability

### 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
- Polarity : As marked

### Ordering Information

Part No.	Remark	Package	Packing
MBR10xxxCD2	General	D2-PAK	800 / Reel
MBR10xxxCD2-H	Halogen Free		

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

Parameter	Symbol	MBR10	MBR10	MBR10	MBR10	MBR10	MBR10	MBR10	MBR10	MBR10	UNIT	
		20 CD2	30 CD2	40 CD2	50 CD2	60 CD2	80 CD2	0100 CD2	0150 CD2	0200 CD2		
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V	
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	V	
Maximum Average Forward Rectified Current (Total) (Per Leg)	$I_F$	10 5									A	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	120						130			A	
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	$V_F$	0.60			0.75		0.85		0.92		V	
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$	$I_R$	0.05 20									mA	
Typical Junction Capacitance (NOTE1)	$C_j$	420			360		280		200		pF	
Typical Thermal Resistance	$R_{\theta JC}$	3									°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

### 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

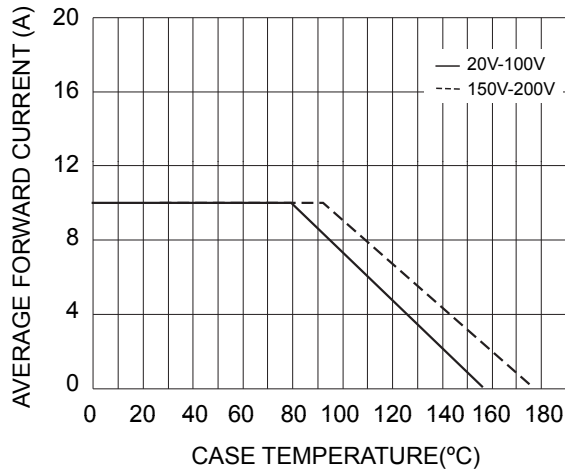


FIG. 2-Typical Forward Characteristics

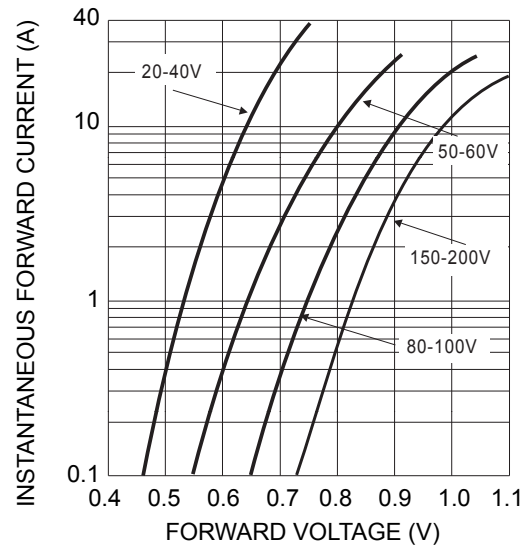


FIG. 3-Maximum Non-Repetitive Forward Surge Current

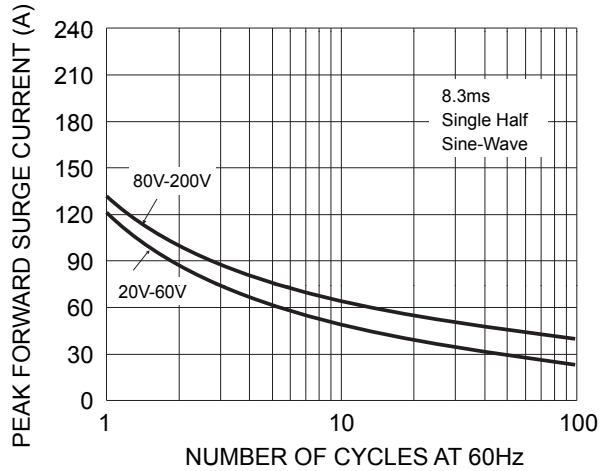
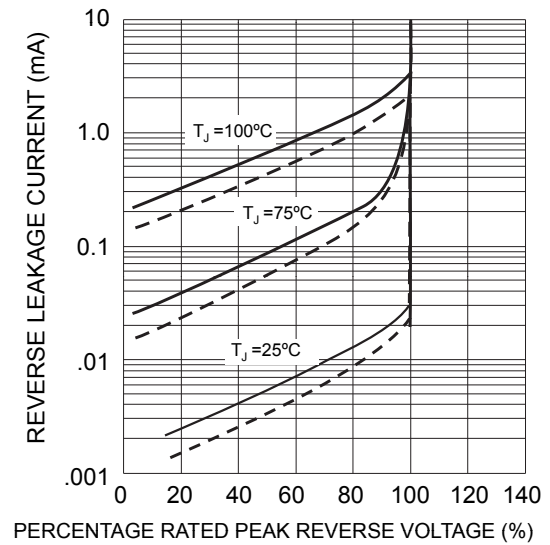
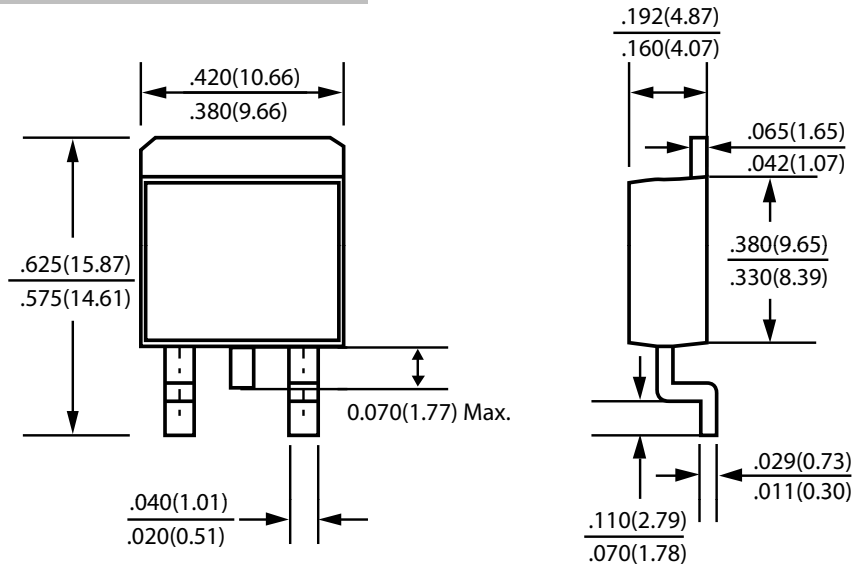


FIG. 4-Typical Reverse Characteristics





### Package Outline Dimensions

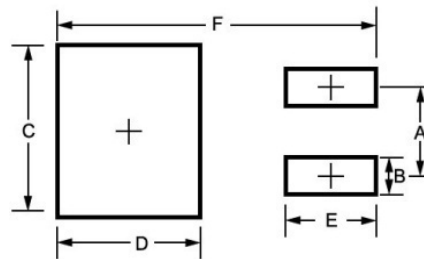


### D2-PAK

Dimensions in inches and (millimeters)

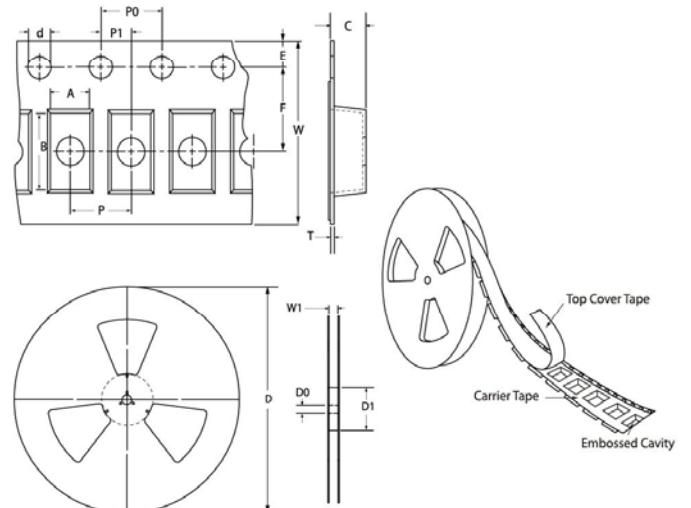
### Suggested Pad Layout

Dimension	Outline	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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