



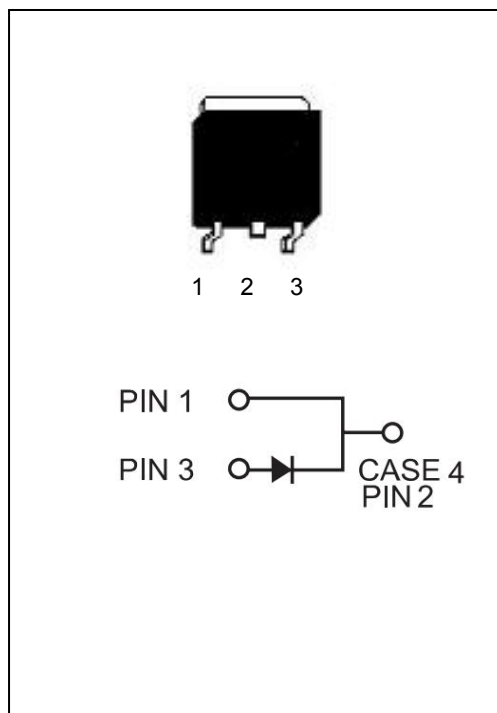
## MBRS10100L 10A High Voltage Power Schottky Rectifier

### General Description

High voltage dual Schottky rectifier suited for switch mode power supplies and other power converters. This device is intended for use in medium voltage operation, and particularly, in high frequency circuits where low switching losses and low noise are required.

### Main Product Characteristics

symbol	value	unit
$I_{F(AV)}$	10	A
$V_{RRM}$	100	V
$V_F$	$\leq 0.85$	V
$T_J$	150	$^{\circ}C$



### Features

- High Surge Capacity
- 150 $^{\circ}C$  Operating Junction Temperature
- 10A Total
- Low  $V_F$
- Guard-ring for Stress Protection
- Pb-free Packages are Available

### Absolute Maximum Ratings ( Per Diode Leg)

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-55~150	$^{\circ}C$
Operating junction temperature range	$T_j$	150	$^{\circ}C$
Repetitive peak reverse voltage ( $T_j=25^{\circ}C$ )	$V_{RRM}$	100	V
Maximum RMS voltage	$V_{RMS}$	70	V
DC Blocking Voltage	$V_R$	100	V
Average Rectified Forward Current(Rated $V_R$ ) $T_C=142^{\circ}C$	$I_{F(AV)}$	10	A



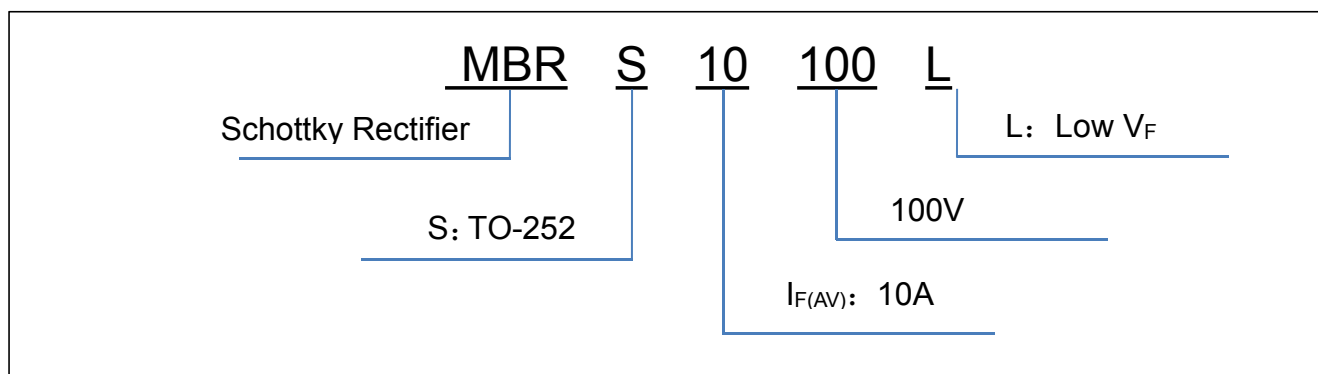
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Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20kHz) $T_C=142^\circ\text{C}$	$I_{FRM}$	10	A
Non Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Half Wave, Single Phase, 60Hz)	$I_{FSM}$	120	A
Voltage Rate of Change (Rated $V_R$ )	dv/dt	10000	V/ $\mu\text{s}$

**Electrical Characteristics** ( $T_j=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Condition	Value (Max)	Unit
Maximum Instantaneous Forward Voltage Drop	$V_F$	$I_F=10\text{A}$	0.85	V
Maximum Instantaneous Reverse Current Drop	$I_R$	$V_R=105\text{V}$	5	$\mu\text{A}$

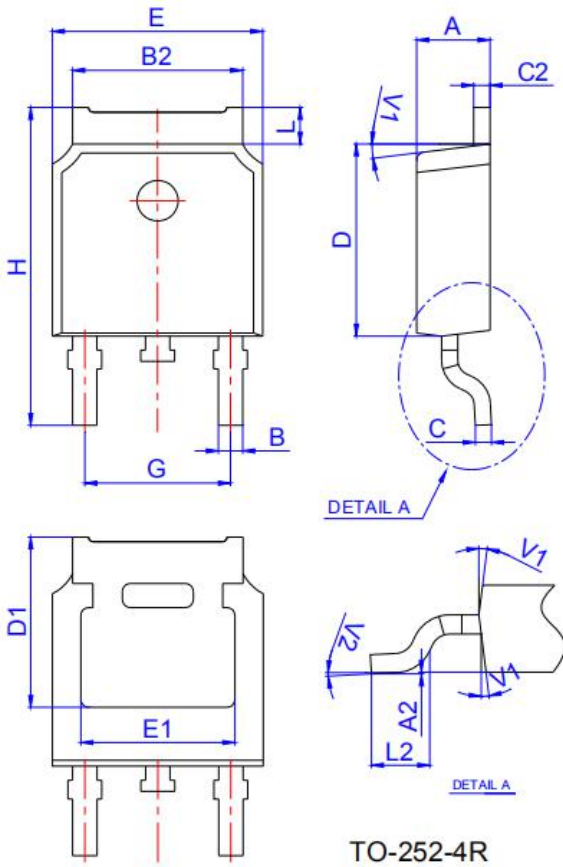
**Ordering Information**





**MBRS10100L 10A High Voltage Power Schottky Rectifier**

**Package Mechanical Data**



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.10	0		0.004
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1	5.30REF			0.209REF		
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2		0°	6°	0°	6°	

FIG.1- FORWARD CURRENT DERATING CURVE

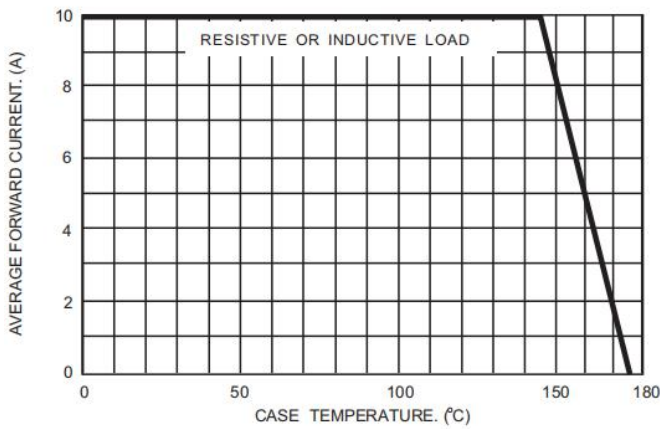
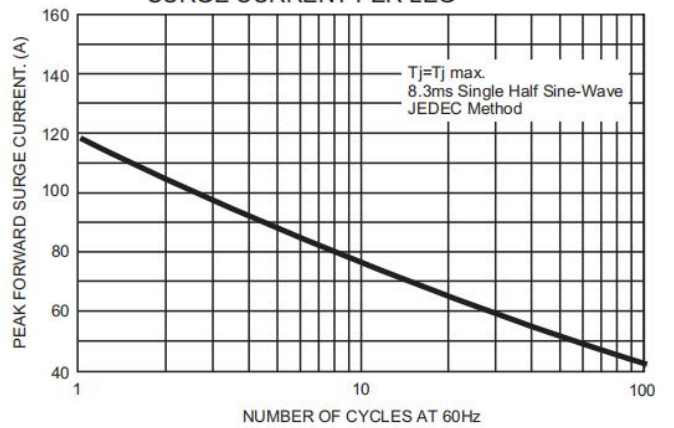


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG





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FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

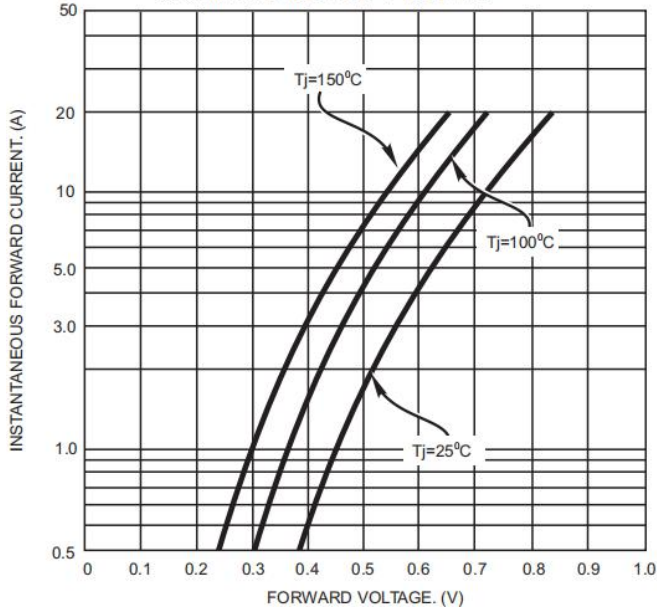


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

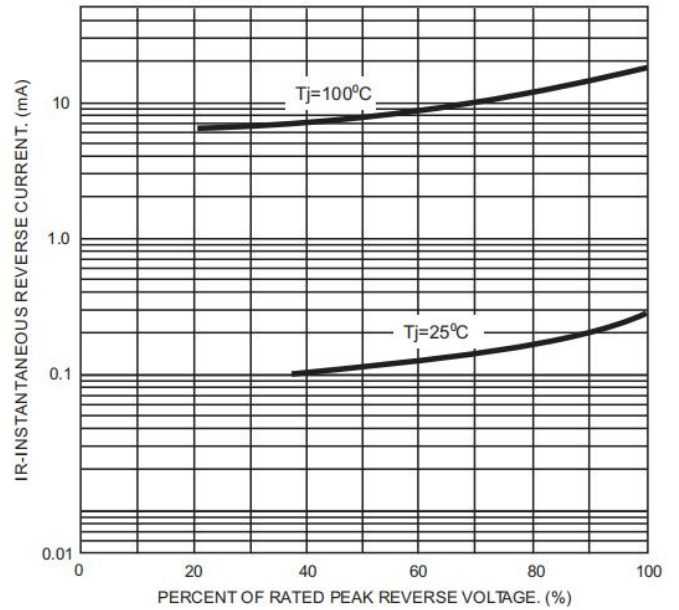


FIG.5- TYPICAL JUNCTION CAPACITANCE

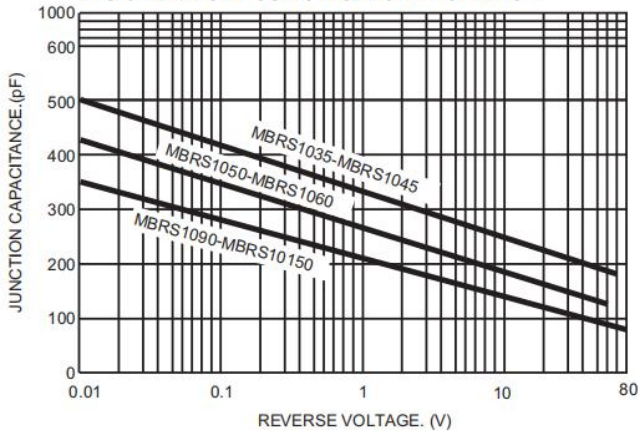
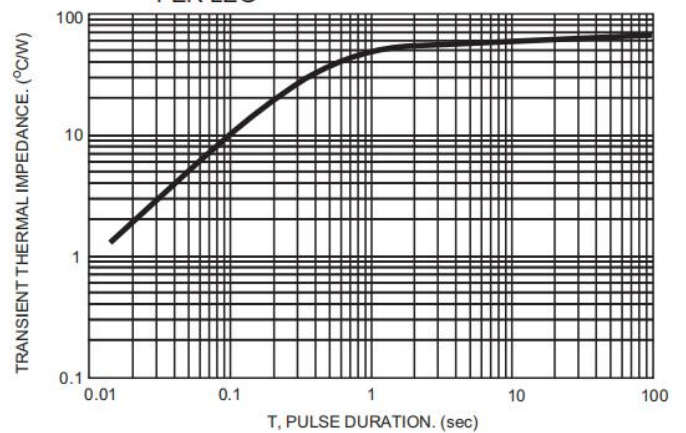


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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