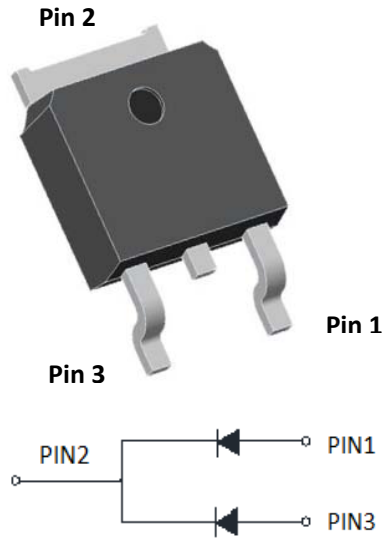




Schottky Diodes



Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-252
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR10100CDS	MBR10150CDS	MBR10200CDS
Device marking code			MBR10100CDS	MBR10150CDS	MBR10200CDS
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	10		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	100		
Current Squared Time @1ms≤t<8.3ms T _j =25°C,	I ² t	A ² s	41		
Storage Temperature	T _{stg}	°C	-55 ~ +175		
Junction Temperature	T _j	°C	-55 ~ +175		

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR10100CDS	MBR10150CDS	MBR10200CDS
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =5.0A	0.83	0.88	0.93
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.1		
	I _{RRM2}		V _{RM} =V _{RRM} T _a =125°C	20		

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



MBR10100CDS THRU MBR10200CDS-F1-W5093HF

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR10100CDS	MBR10150CDS	MBR10200CDS
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	5.0		

■ Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR10100CDS THRU MBR10200CDS	Approximate 0.32	2500	2500	25000	Reel

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

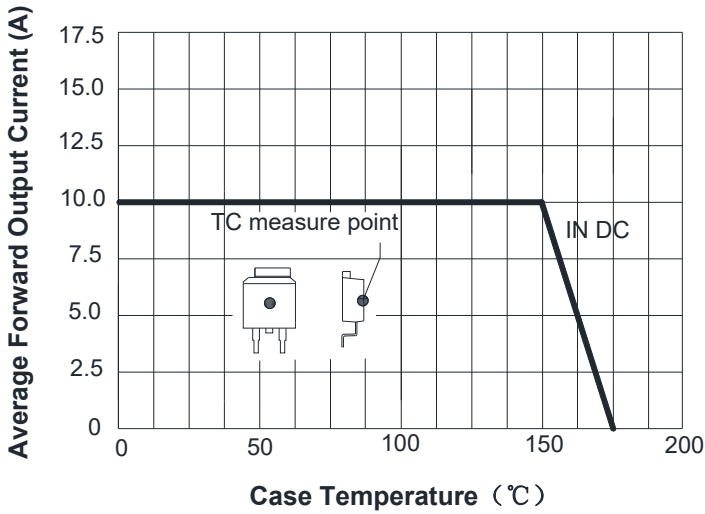


FIG2: Surge Forward Current Capability

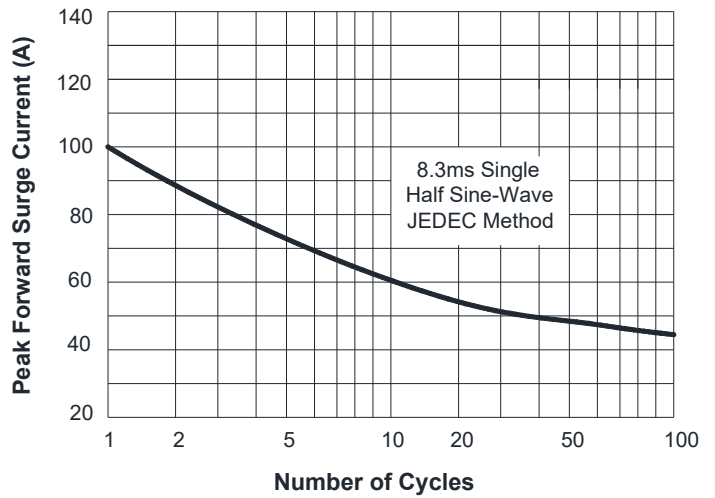


FIG3: Forward Voltage

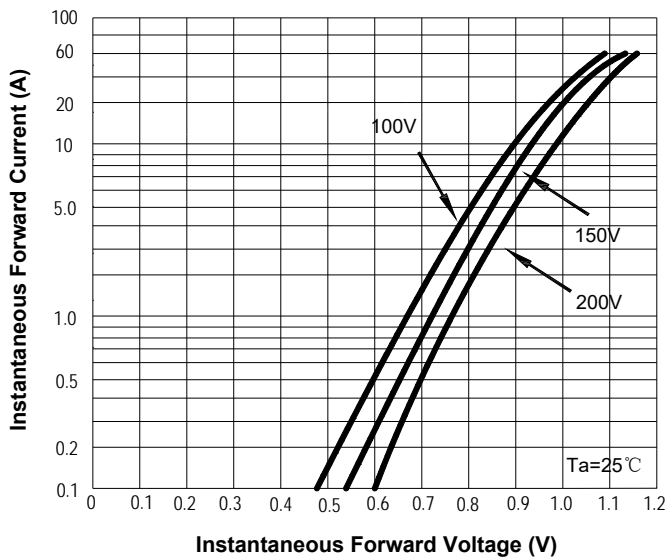
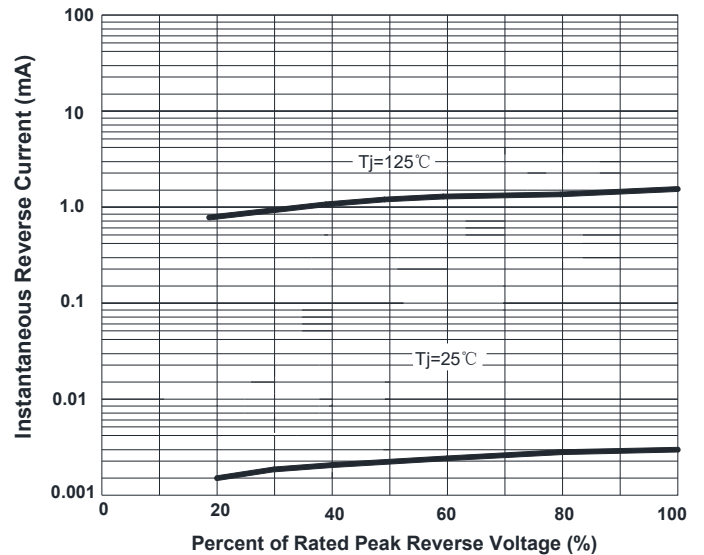
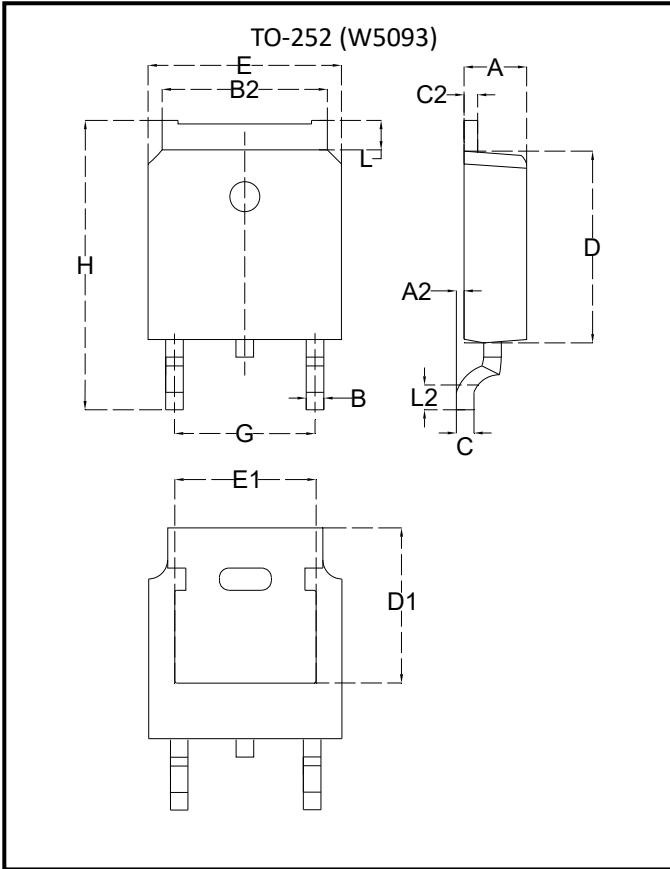


FIG4: Instantaneous Reverse Characteristics



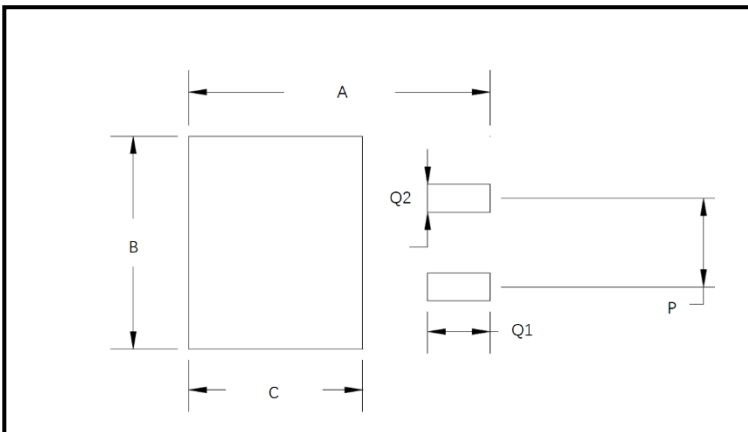


■ **Outline Dimensions**



TO-252 (W5093)		
Dim	Min	Max
A	2.20	2.40
A2	-	0.10
B	0.66	0.86
B2	5.10	5.46
C	0.46	0.58
C2	0.44	0.58
D	5.90	6.300
D1	5.30 REF	
E	6.40	6.80
E1	4.63	-
G	4.372	4.772
H	9.80	10.40
L	1.09	1.21
L2	1.35	1.65

■ **Suggested Pad Layout**



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52



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