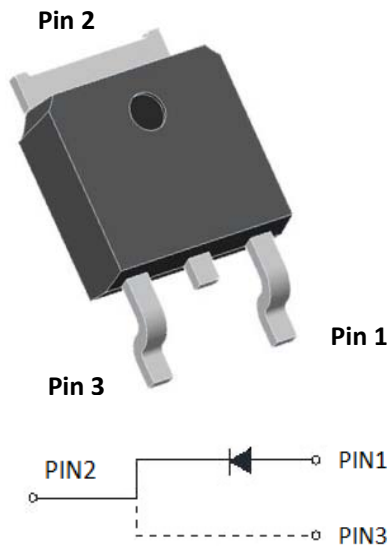


Schottky Diodes



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	MBR10300D-F1-W5094HF
Device marking code			MBR10300D
Repetitive Peak Reverse Voltage	V _{RRM}	V	300
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	200
Current Squared Time @1ms≤t<8.3ms T _j =25°C	I ² t	A ² s	167
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR10300D-F1-W5094HF
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A	0.975
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.05
	I _{RRM2}		V _{RM} =V _{RRM} T _a =100°C	10

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

Note2:Pulse test:pulse width 40mS



MBR10300D-F1-W5094HF

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR10300D-F1-W5094HF
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	5.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR10300D-F1-W5094HF	Approximate 0.31	2500	2500	25000	Reel

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

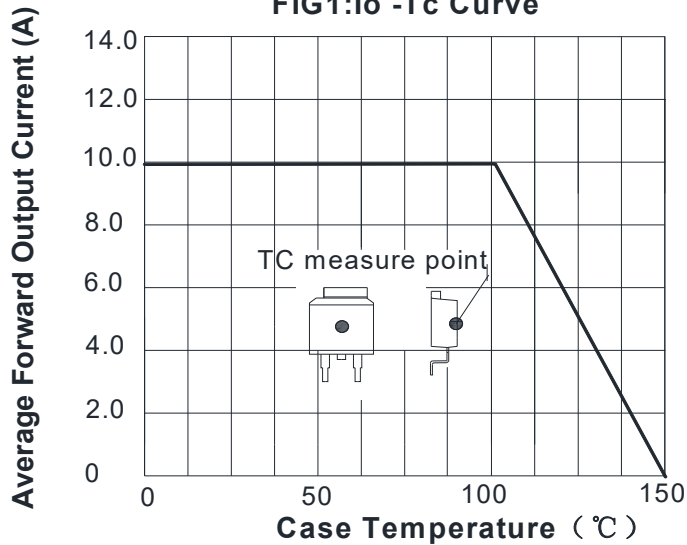


FIG2: Surge Forward Current Capability

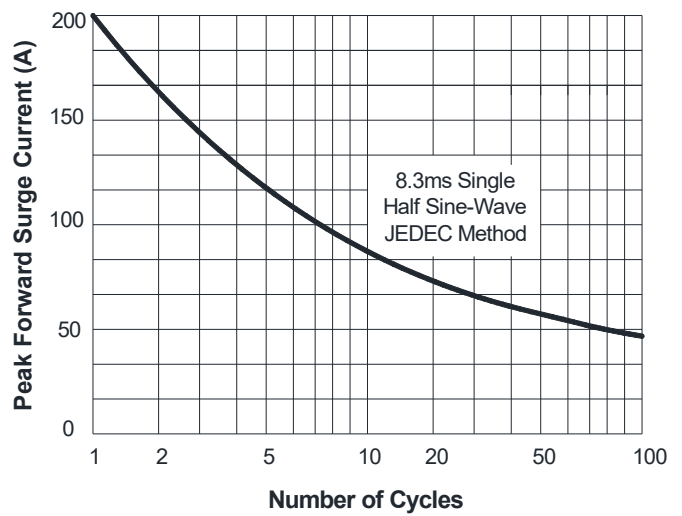


FIG3: Forward Voltage

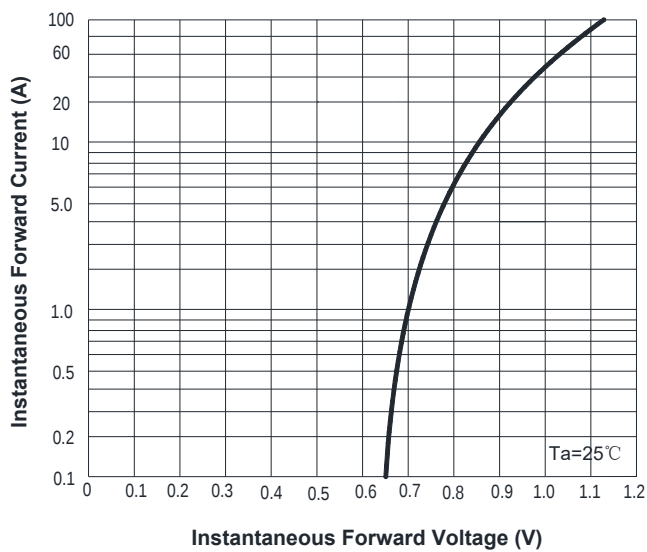
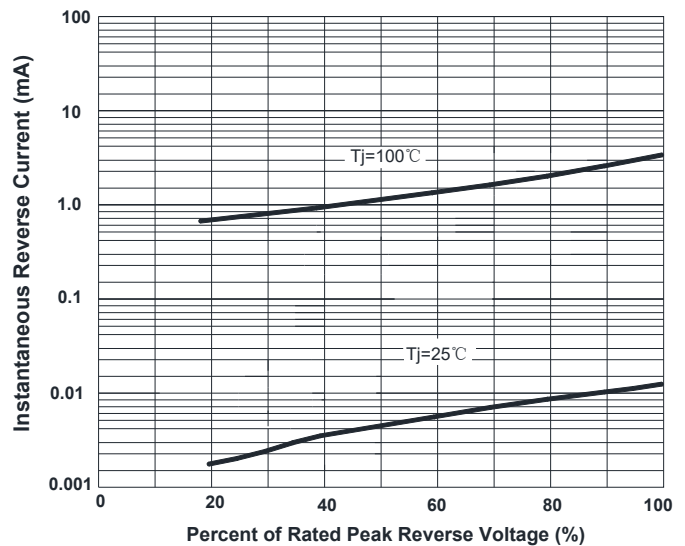


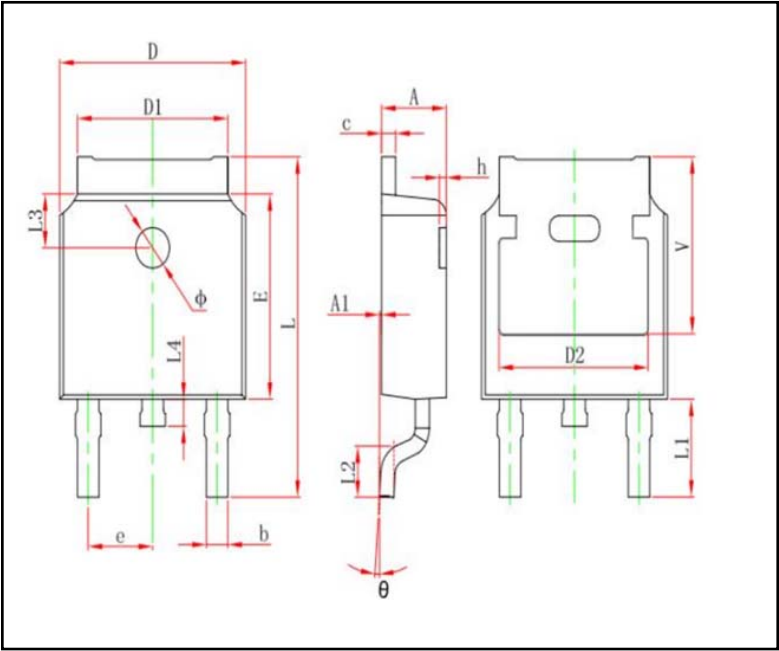
FIG4: Typical Reverse Characteristics





MBR10300D-F1-W5094HF

■Outline Dimensions



TO-252		
Dim	Min	Max
A	2.20	2.40
A1	0	0.15
b	0.66	0.86
C	0.46	0.58
D	6.50	6.70
D1	5.10	5.53
D2	4.70	4.90
E	6.00	6.20
e	2.186	2.386
L	9.80	10.43
L1	2.67	3.27
L2	1.40	1.70
L3	1.50	1.70
L4	0.60	1.05
Φ	1.10	1.30
θ	0°	8°
h	0	0.30
V	5.20	5.40



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