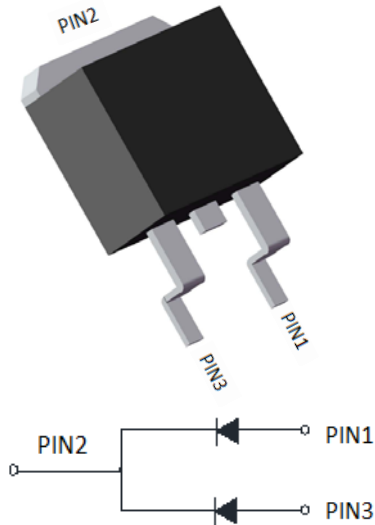


Schottky Diodes



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
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Typical Applications

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

Mechanical Data

- **Package:** TO-263
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_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRBL3045CT-F2-W5094HF
Device marking code			MBRBL3045CT
Repetitive Peak Reverse Voltage	V _{RRM}	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG 1)	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	250
Current Squared Time @1ms≤t≤8.3ms T _j =25°C, rating of per diode	I ² t	A ² s	259
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRBL3045CT-F2-W5094HF
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =15.0A	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _j =25°C	0.2
	I _{RRM2}		V _{RM} =V _{RRM} T _j =100°C	50

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

Note2:Pulse test:pulse width 40mS



MBRBL3045CT-F2-W5094HF

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

PARAMETER		SYMBOL	UNIT	MBRBL3045CT-F2-W5094HF
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	2.0

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

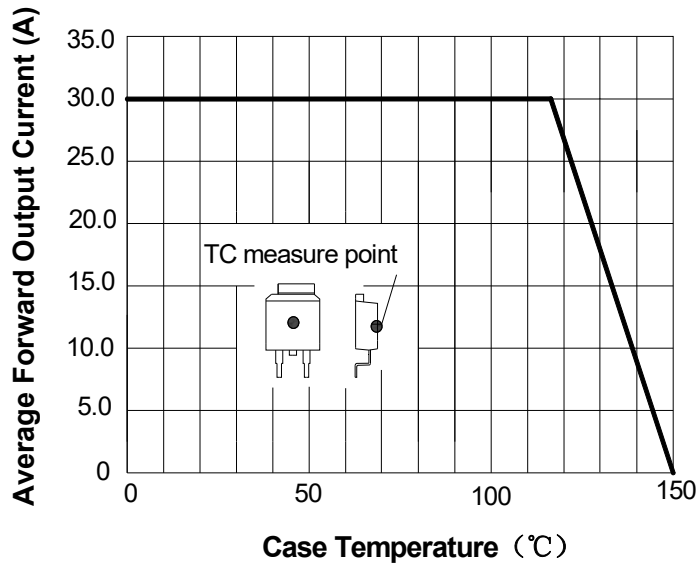


FIG2: Surge Forward Current Capability

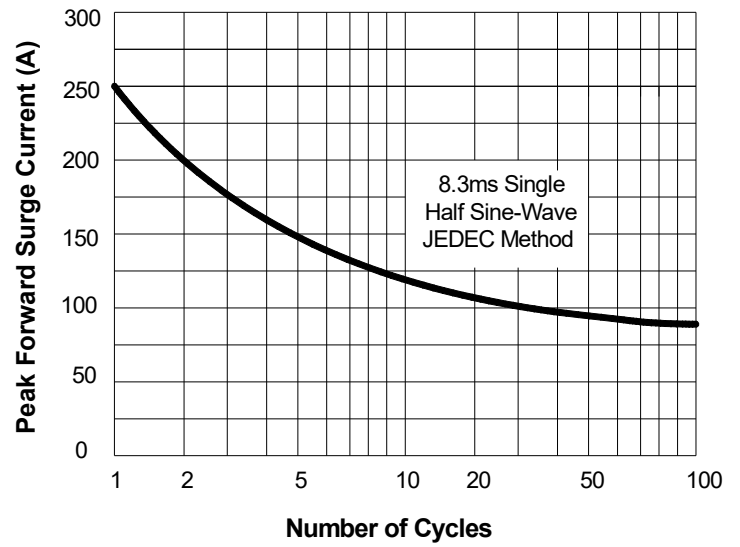


FIG3: Forward Voltage

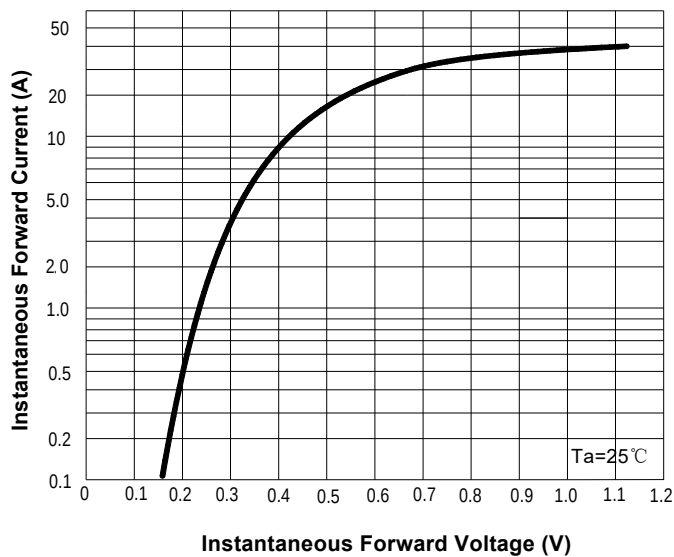
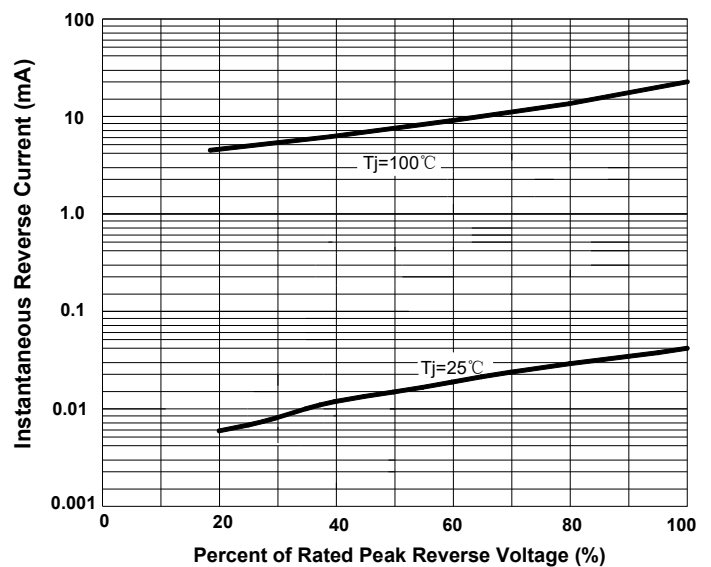


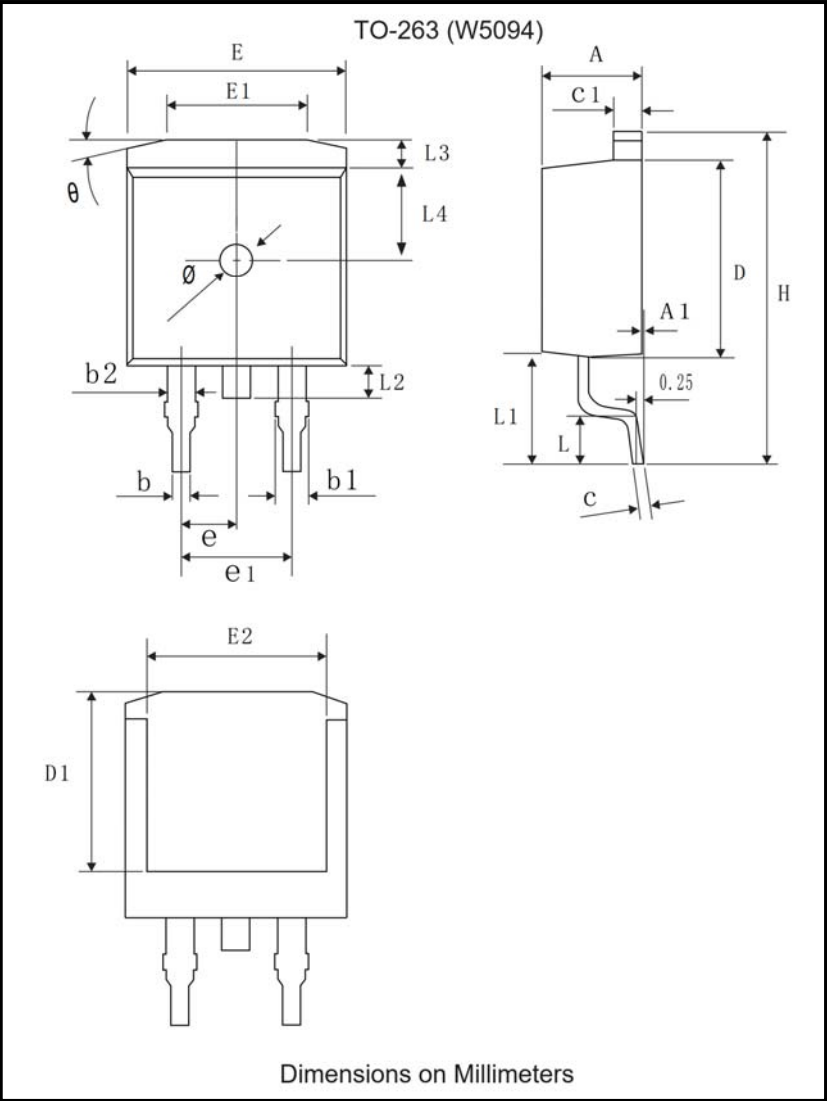
FIG4: Typical Reverse Characteristics





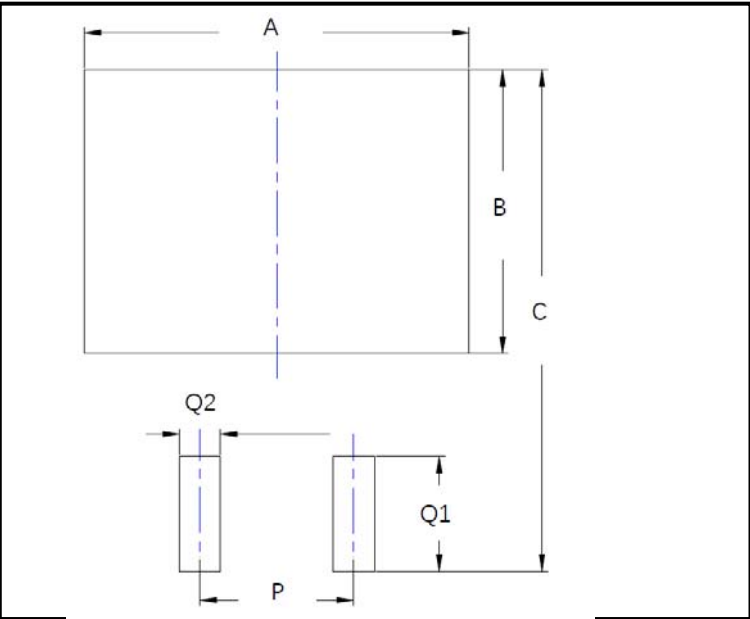
MBRBL3045CT-F2-W5094HF

■Outline Dimensions



TO-263		
Dim	Min	Max
A	4.30	4.70
A1	0.00	0.25
b	0.70	0.90
B1	1.17	1.37
B2	1.17	1.37
C	0.40	0.60
C1	1.25	1.35
D	9.00	9.20
D1	8.00	8.20
H	14.9	15.5
E	9.80	10.2
E1	6.30	6.50
E2	7.90	8.10
e1	4.93	5.23
L	1.85	2.45
L1	4.45	4.85
L2	1.30	1.70
L3	1.15	1.35
L4	4.50	4.60
Ø	1.5 REF	
e	2.54 BSC	
θ	13°TYP	

■Suggested Pad Layout



Dim	Millimeters
A	12.7
B	9.4
C	16.6
P	5.08
Q1	3.8
Q2	1.35



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