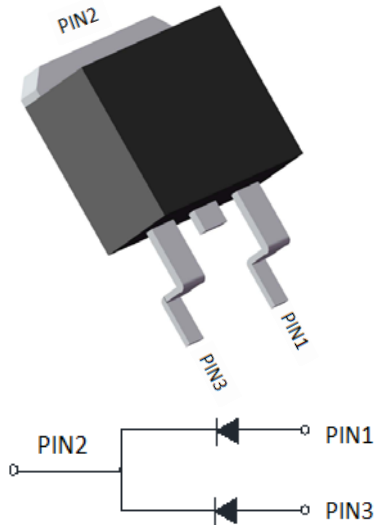


Schottky Diodes



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_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRBU40100CT
Device marking code			MBRBU40100CT
Repetitive Peak Reverse Voltage	VRRM	V	100
Average Rectified Output Current @60Hz sine wave, R-load, T _a (FIG 1)	I _O	A	40
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	320
Current Squared Time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	425
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	MBRBU40100CT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =20.0A	0.71
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =VRRM T _a =25°C	0.2
	I _{RRM2}		V _{RM} =VRRM T _a =100°C	100

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

Note2:Pulse test:pulse width 40mS



MBRBU40100CT-F2-W5094HF

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

PARAMETER		SYMBOL	UNIT	MBRBU40100CT
Thermal Resistance	Between junction and case	RθJ-C	°CW	2.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRBU40100CT	Approximate 1.43	50	2000	8000	Tube
MBRBU40100CT	Approximate 1.43	1000	2000	10000	Reel

■ Characteristics (Typical)

FIG1:Io -Tc Curve

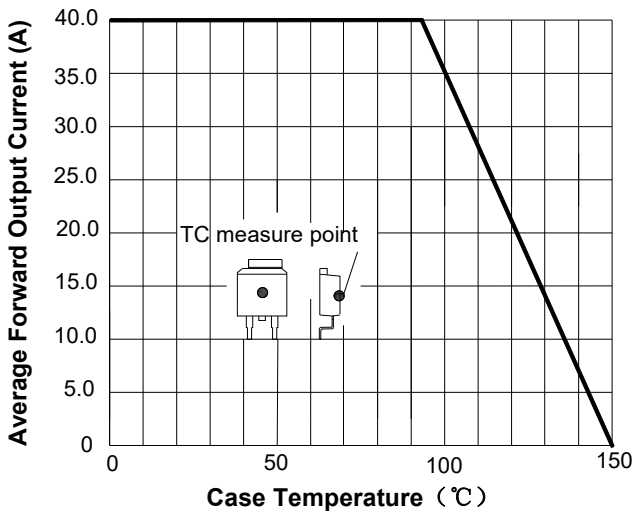


FIG2: Surge Forward Current Capability

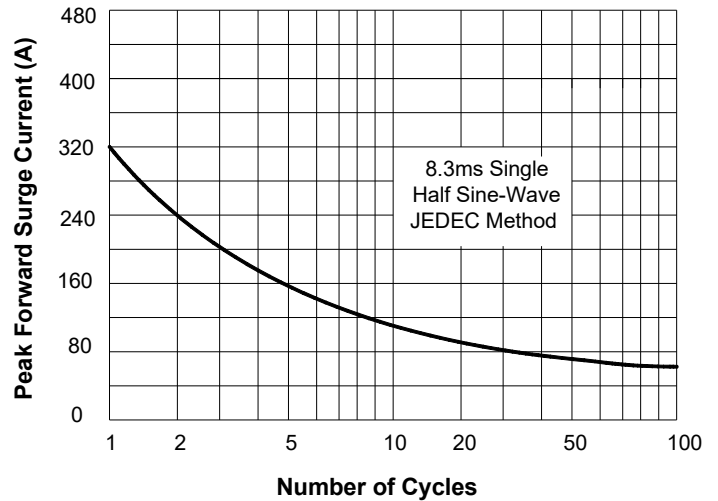


FIG3: Forward Voltage

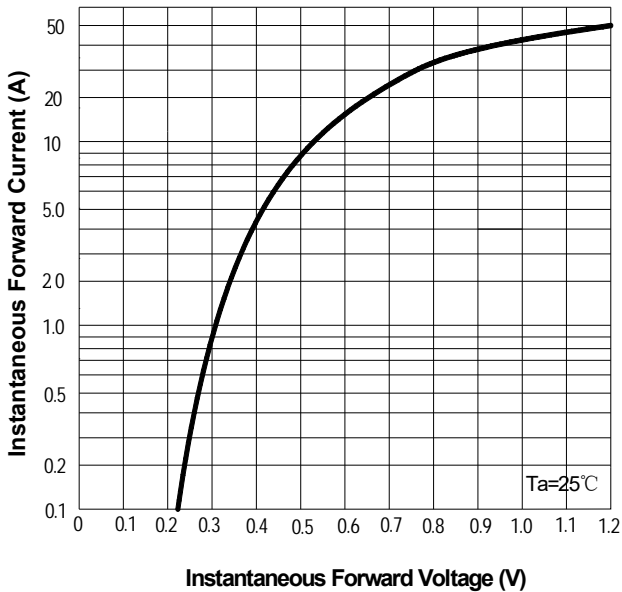
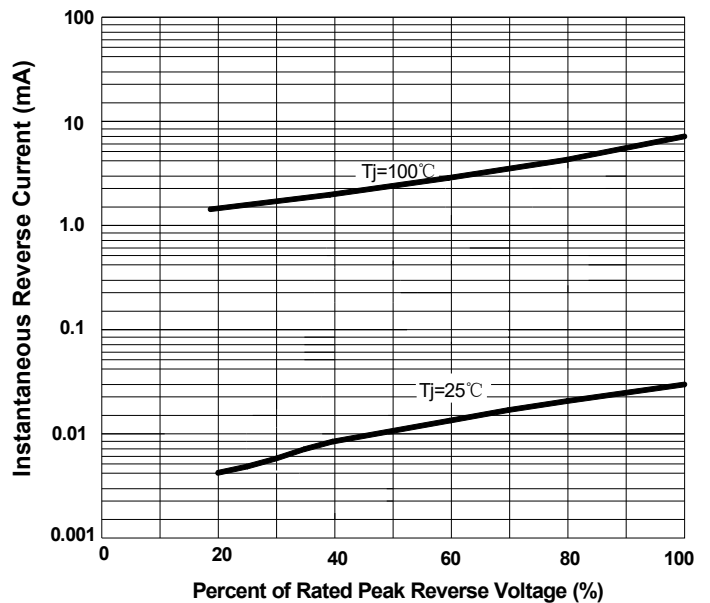


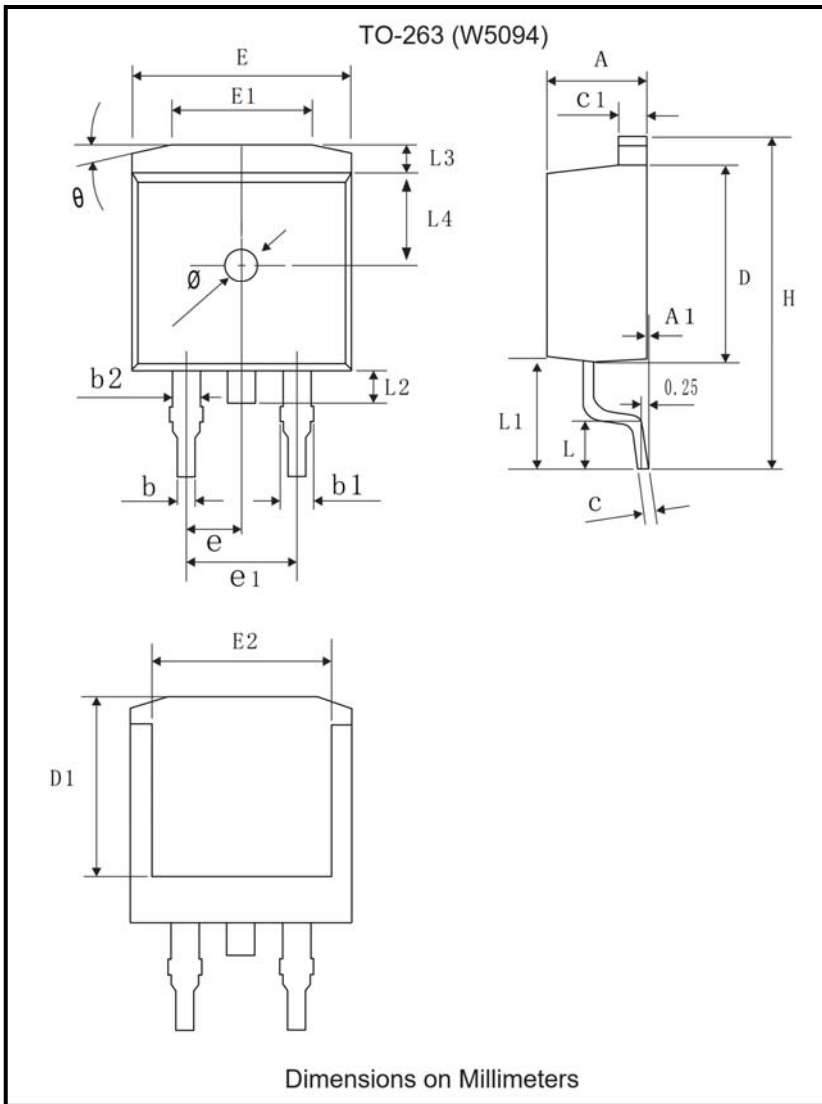
FIG4: Typical Reverse Characteristics





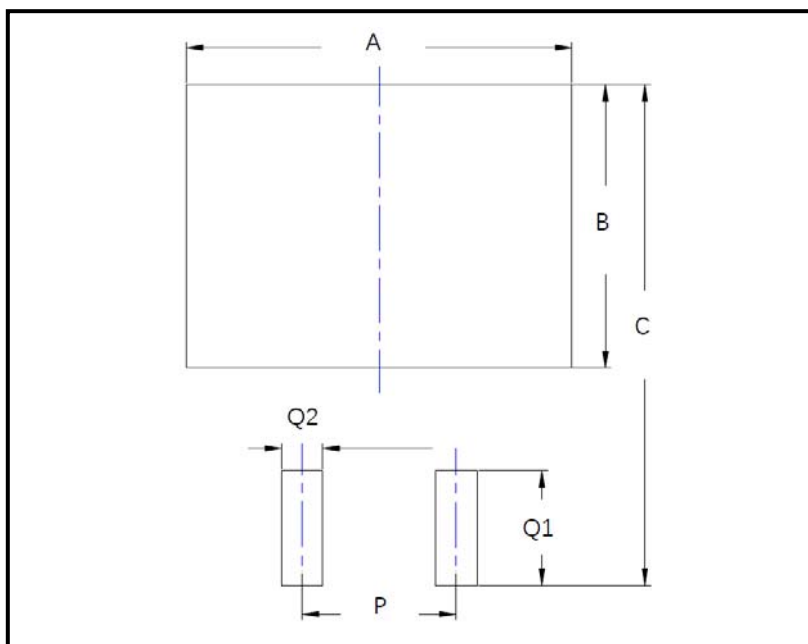
MBRBU40100CT-F2-W5094HF

■ 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
∅	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



MBRBU40100CT-F2-W5094HF

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