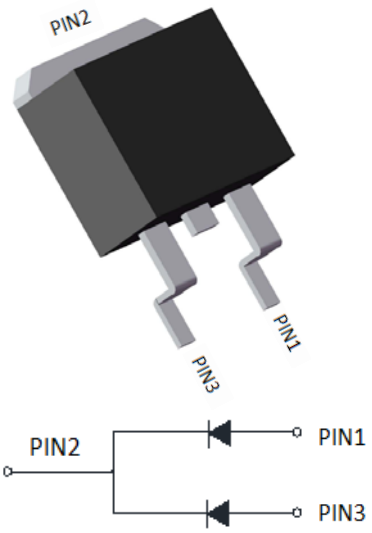
Schottky Diodes



Features

- High frequency operation
- Low forward voltage drop
- 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℃

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℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRB3020CT	MBRB3035CT	MBRB3045CT	MBRB3050CT	MBRB3060CT
Device marking code			MBRB3020CT	MBRB3035CT	MBRB3045CT	MBRB3050CT	MBRB3060CT
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	35	45	50	60
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_a=25℃	I_{FSM}	A	200				
Current Squared Time @1ms≤t<8.3ms Tj=25℃	I^2t	A^2s	167				
Storage Temperature	T_{stg}	℃	-55 ~ +175				
Junction Temperature	T_j	℃	-55 ~ +150			-55 ~ +175	

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRB3020CT	MBRB3035CT	MBRB3045CT	MBRB3050CT	MBRB3060CT
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=15.0A	0.65			0.75	
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	V_{RM}=V_{RRM} T_a=25℃	0.1				
	I_{RRM2}		V_{RM}=V_{RRM} T_a=100℃	20				

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

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MBRB3020CT	MBRB3035CT	MBRB3045CT	MBRB3050CT	MBRB3060CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	2.0				

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRB3020CT THRU MBRB3060CT	Approximate 1.43	50	2000	8000	Tube

■Characteristics (Typical)

FIG1:Io-Tc Curve

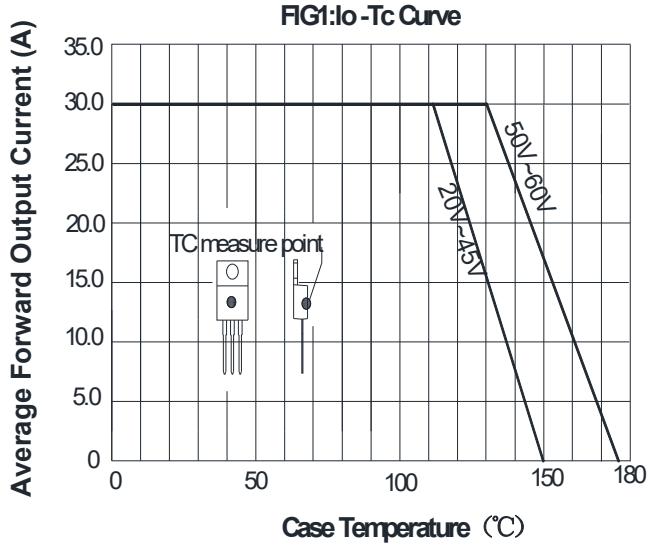


FIG2:Surge Forward Current Capability

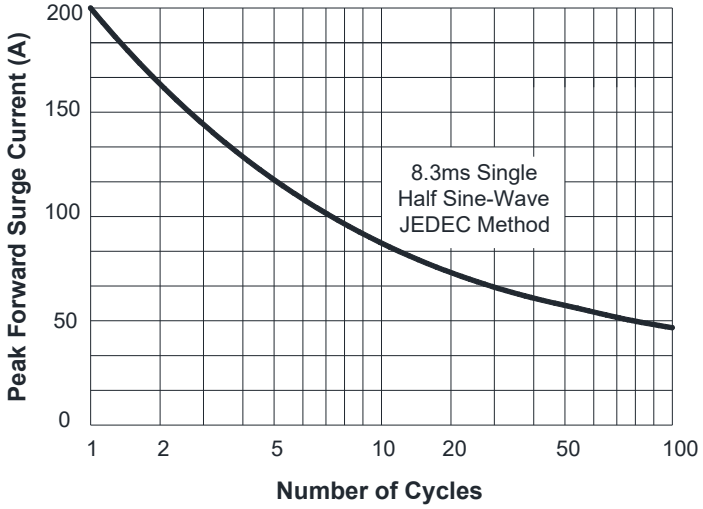


FIG3: Forward Voltage

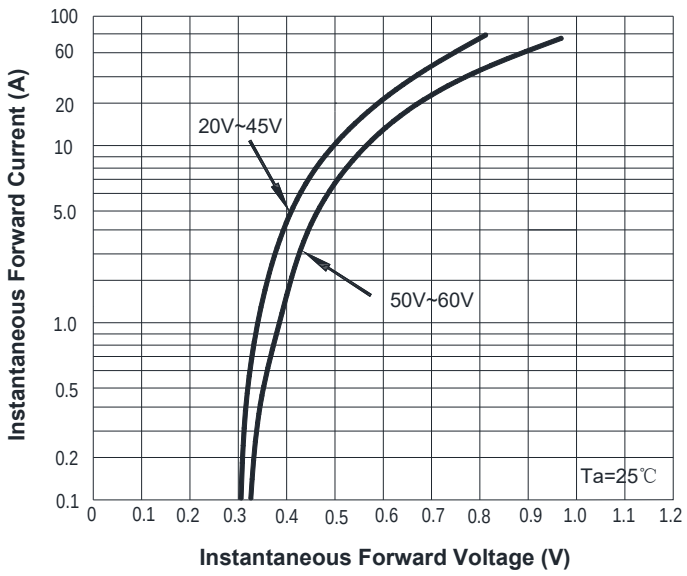
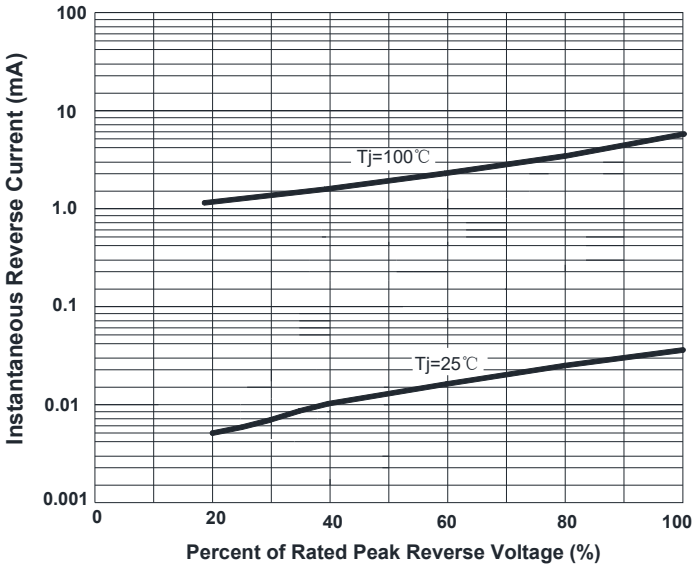
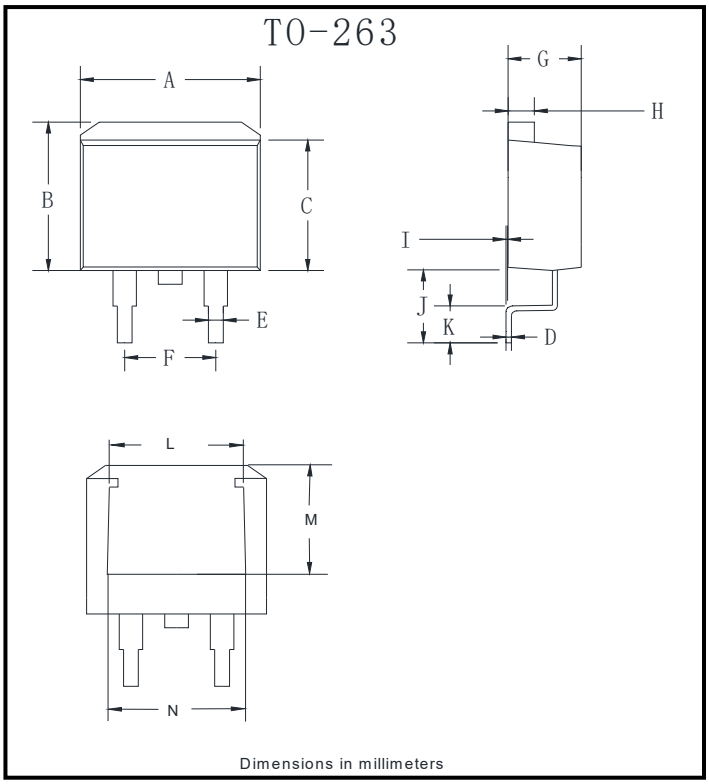


FIG.4: Typical Reverse Characteristics

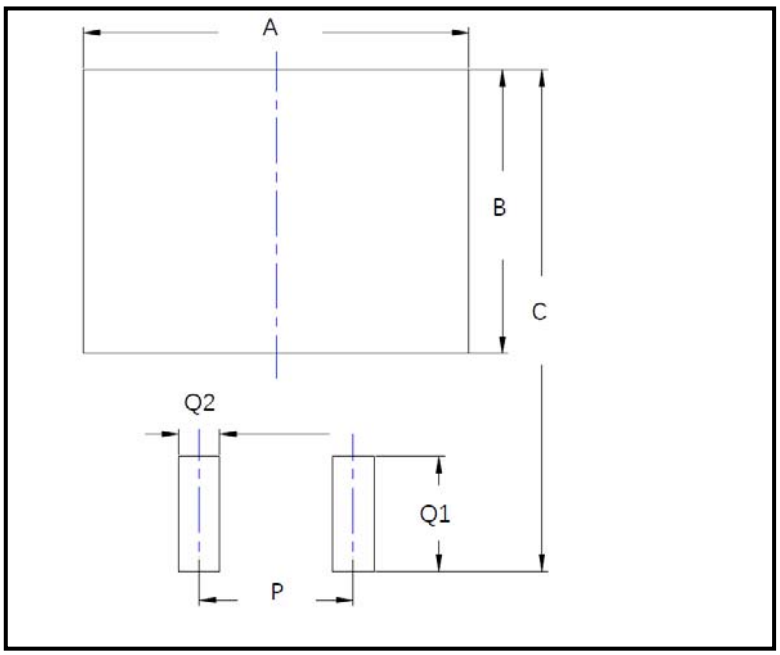


■Outline Dimensions



TO-263		
Dim	Min	Max
A	9.5	11.5
B	9.7	10.5
C	8.4	9.0
D	0.28	0.64
E	0.68	0.94
F	4.55	5.6
G	4.04	5.10
H	1.14	1.4
I	0	0.2
J	4.9	6.05
K	1.79	2.79
L	7.3	7.9
M	6.2	6.8
N	7.6	8.2

■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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