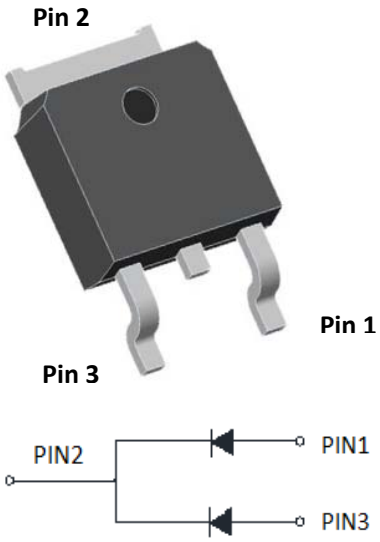


Schottky Diodes

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 (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR10100CDSA
Device marking code			MBR10100CDSA
Repetitive Peak Reverse Voltage	V_{RRM}	V	100
Maximum RMS Voltage	V_{RMS}	V	70
Maximum DC blocking Voltage	V_{DC}	V	100
Average Rectified Output Current @60Hz sine wave, R-load, Tj=25℃	IO	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	120
Single Pulse Avalanche Energy @ Tp=40uS, Tj=25℃,L=15mH	EAS	mJ	173
Single Pulse Reverse Avalanche Current, Tj=25℃,L=15mH	Ipr	A	4.8
Current Squared Time @1ms≤t<8.3ms Tj=25℃,	I^2t	A^2s	41
Typical Junction capacitance @4V,1MHz	Cj	pF	180
Storage Temperature	Tstg	℃	-55 ~ +175
Junction Temperature	Tj	℃	-55 ~ +175

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V_{FM}	V	I_{FM}=5.0A Tj=25℃	0.50	0.75	0.85
			I_{FM}=5.0A Tj=125℃	-	0.63	0.70
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25℃	-	-	0.10
	I_{RRM2}	mA	VRM=VRRM Tj=125℃	-	-	10

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

Note2:Pulse test:pulse widh 40mS

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

PARAMETER		SYMBOL	UNIT	MBR10100CDSA
Thermal Resistance	Between junction and case	$R\theta_{J-C}$	℃/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
MBR10100CDSA	Approximate 0.32	2500	2500	25000	Reel

■Characteristics (Typical)

FIG1:Io -Tc Curve

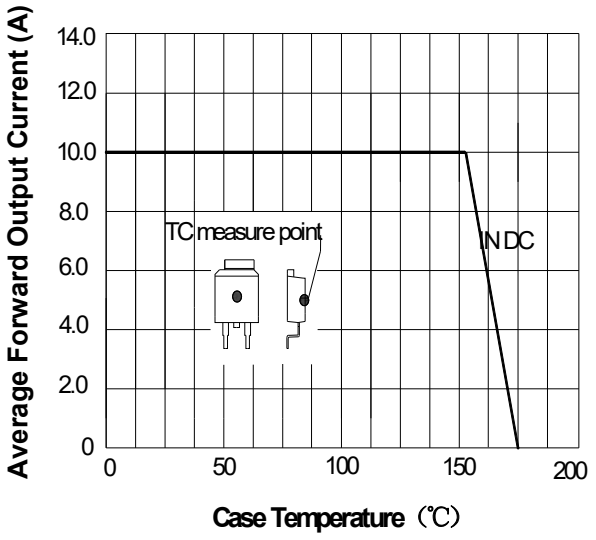


FIG2:Surge Forward Current Capability

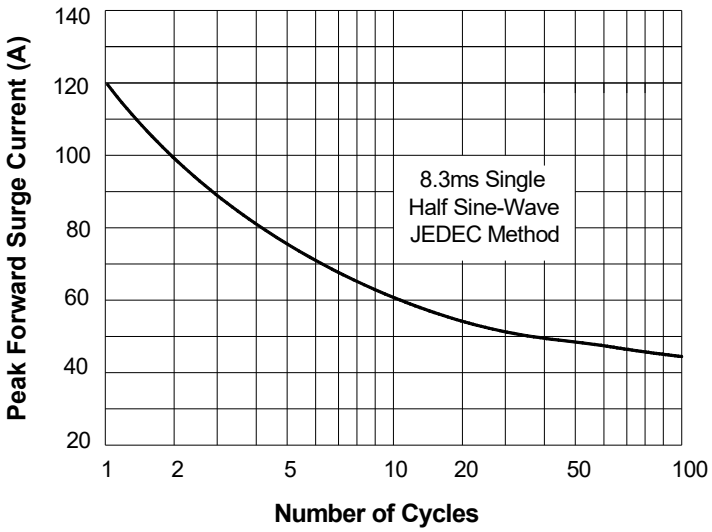


FIG3: Forward Voltage

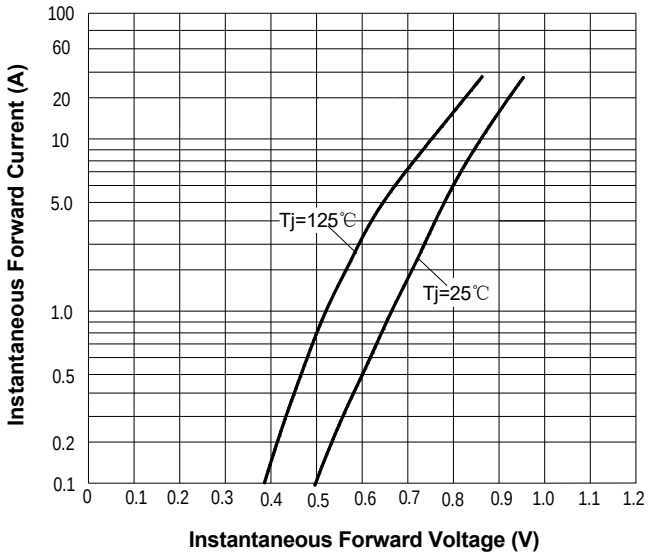
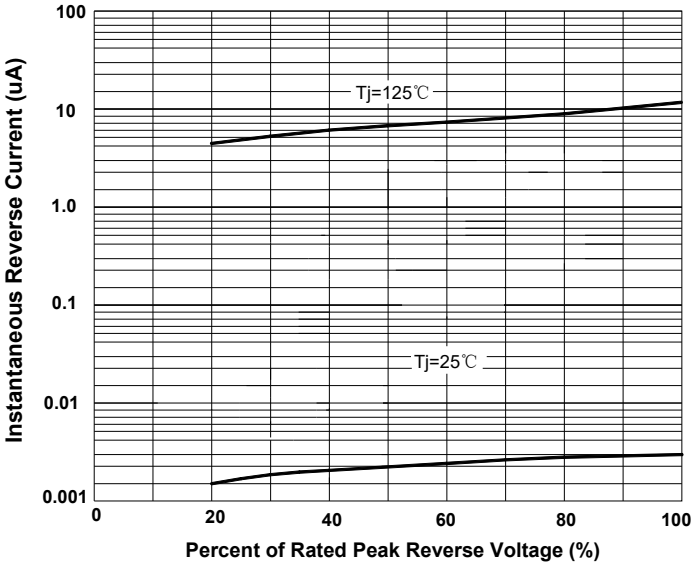
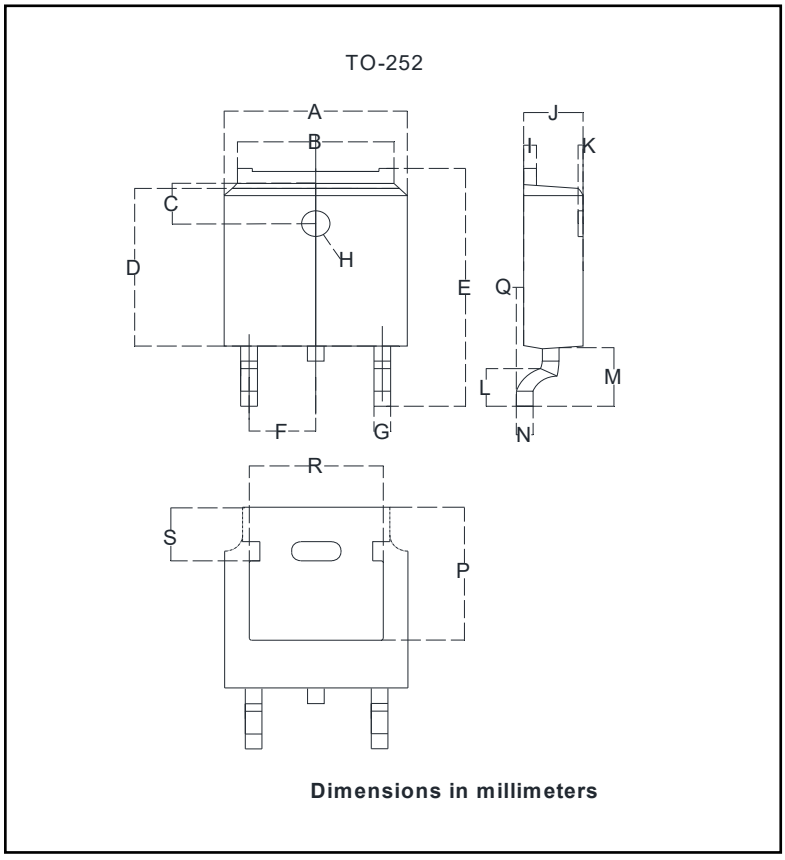


FIG.4: Instantaneous Reverse Characteristics

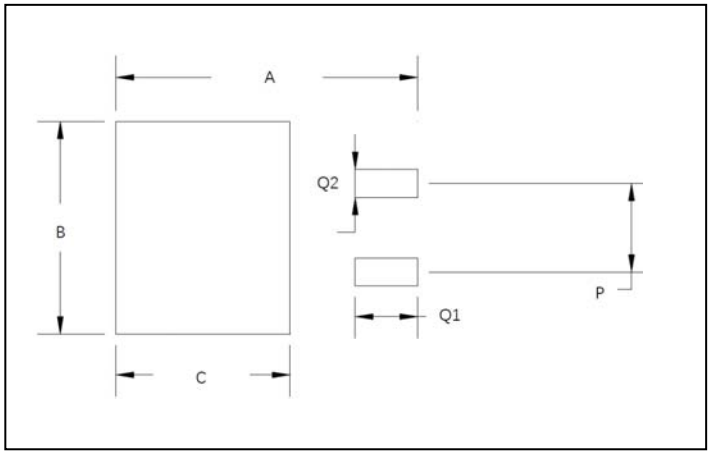


■Outline Dimensions



TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ1.050	Φ1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
P	5.15	5.45
Q	0	0.2
R	4.50	5.10
S	1.60	2.40

■ 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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