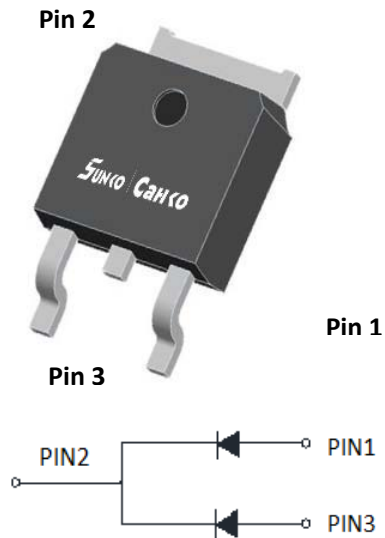




Schottky Diodes

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, -
- **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	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, T _j =25°C	I _O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	120
Single Pulse Avalanche Energy @ T _p =40uS, T _j =25°C,L=15mH	EAS	mJ	173
Single Pulse Reverse Avalanche Current, T _j =25°C,L=15mH	I _{pr}	A	4.8
Current Squared Time @1ms≤t<8.3ms T _j =25°C ,	I ² t	A ² s	41
Typical Junction capacitance @4V,1MHz	C _j	pF	180
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175

MBR10100CDSA

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V _{FM}	V	I _{FM} =5.0A T _j =25°C	0.50	0.75	0.85
			I _{FM} =5.0A T _j =125°C	-	0.63	0.70
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	V _{RM} =V _{RRM} T _j =25°C	-	-	0.10
	I _{RRM2}	mA	V _{RM} =V _{RRM} T _j =125°C	-	-	10

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

Note2:Pulse test:pulse width 40mS

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

PARAMETER		SYMBOL	UNIT	MBR10100CDSA
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	5.0

■Ordering Information (Example)

PREFERRED 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:I_o-T_c Curve

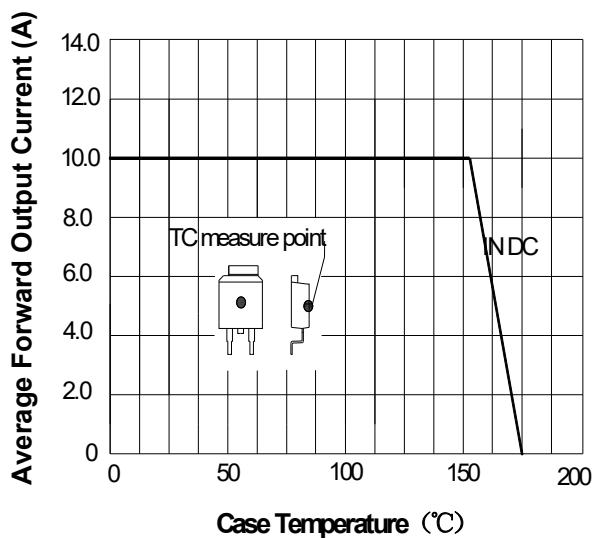


FIG2: Surge Forward Current Capability

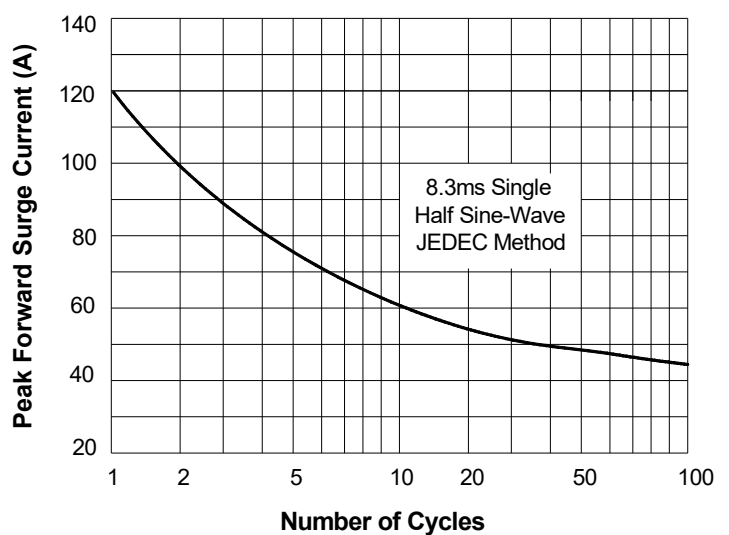


FIG3: Forward Voltage

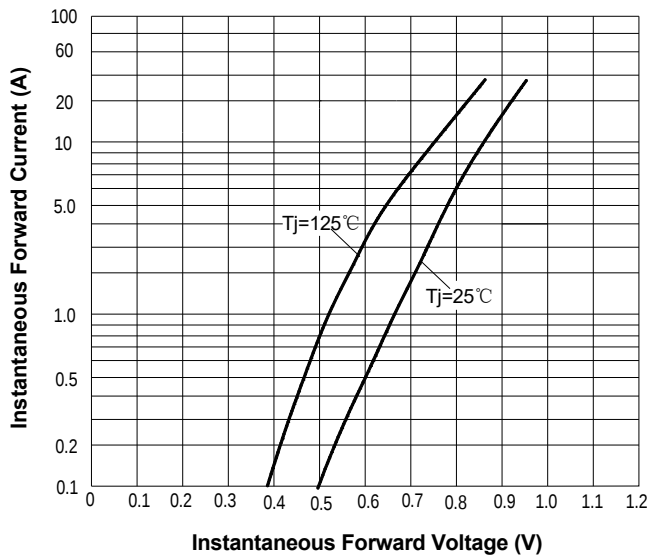
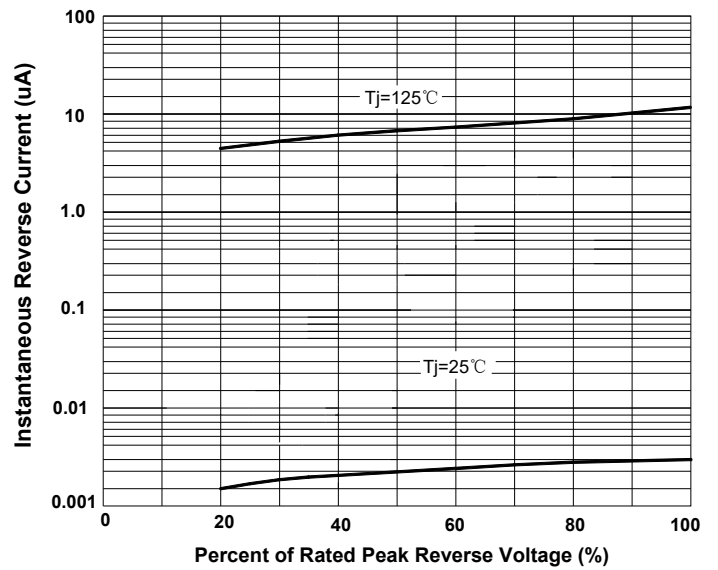
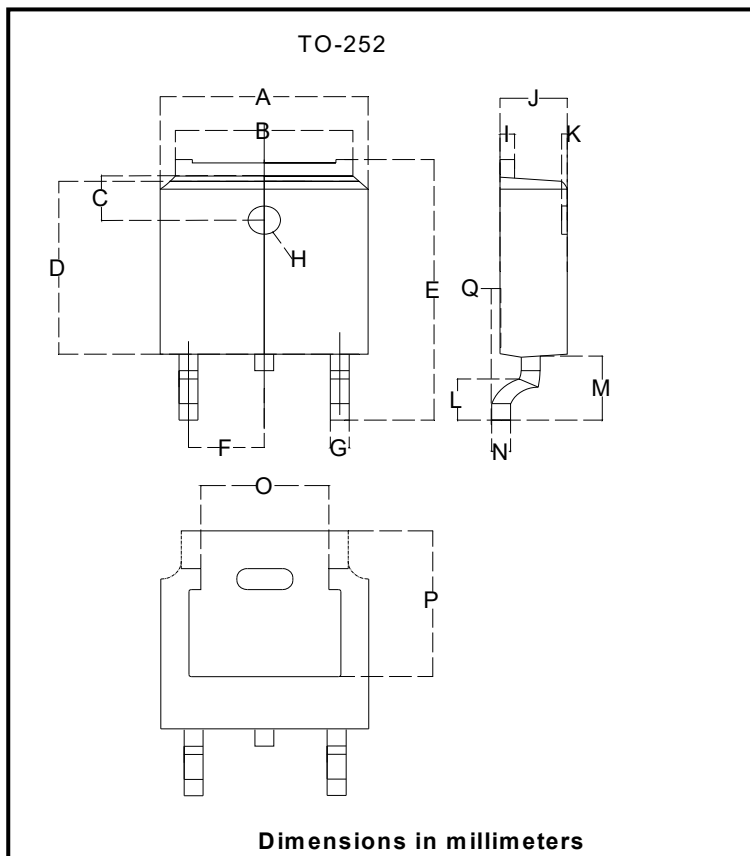


FIG.4: Instantaneous Reverse Characteristics

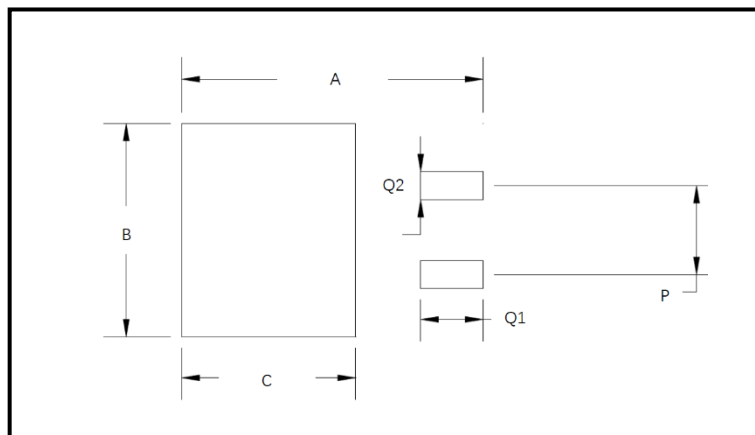


■Outline Dimensions



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	$\Phi 1.050$	$\Phi 1.350$
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
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

■ 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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