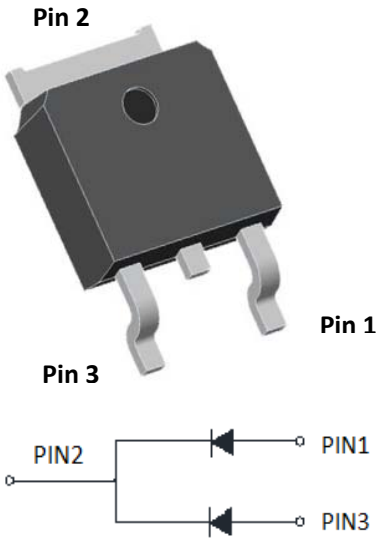


Schottky Diodes

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 (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR2045CDS
Device marking code			MBR2045CDS
Repetitive Peak Reverse Voltage	V_{RRM}	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T_C=85℃	I_O	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T_a=25℃	I_{FSM}	A	120
Current Squared Time @1ms≤t≤8.3ms Tj=25℃,	I^2t	A^2s	59
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR2045CDS
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=10.0A	0.65
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	V_{RM}=V_{RRM} T_a=25℃	0.2
	I_{RRM2}		V_{RM}=V_{RRM} T_a=125℃	100

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	MBR2045CDS
Thermal Resistance	Between junction and case	RθJ-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
MBR2045CDS	Approximate 0.32	2500	2500	25000	Reel

■Characteristics (Typical)

FIG1:Io -Tc Curve

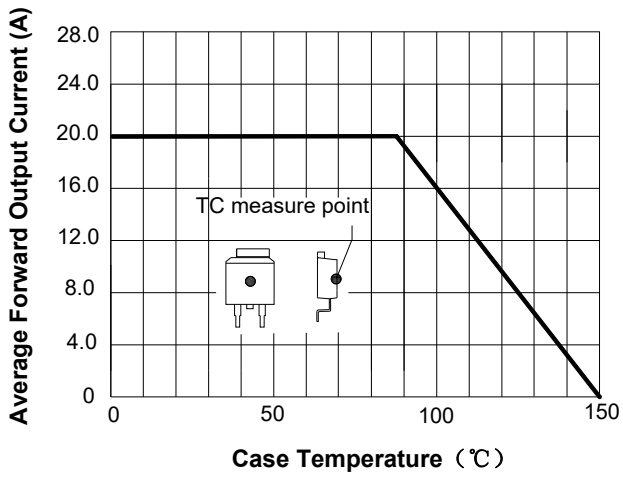


FIG2:Surge Forward Current Capability

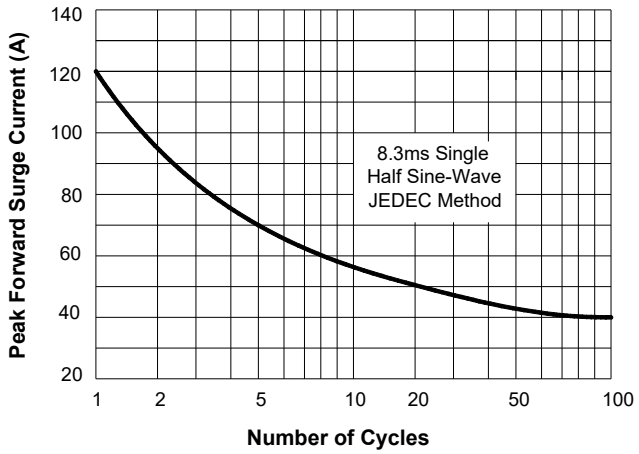


FIG3: Forward Voltage

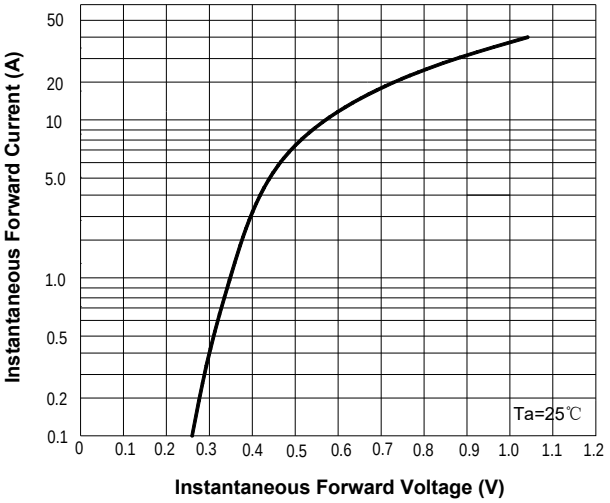
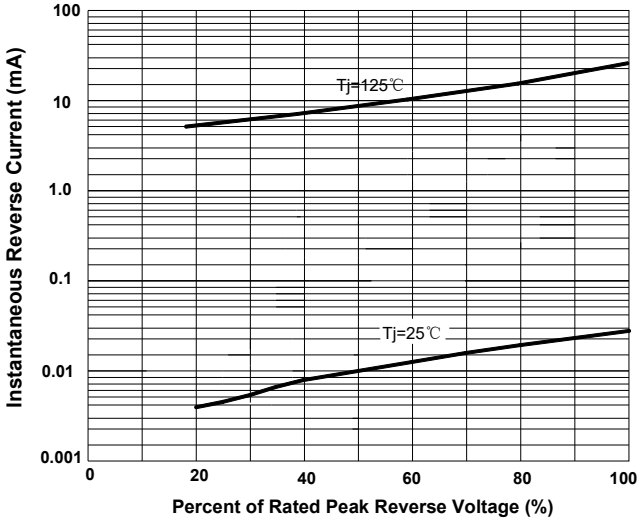
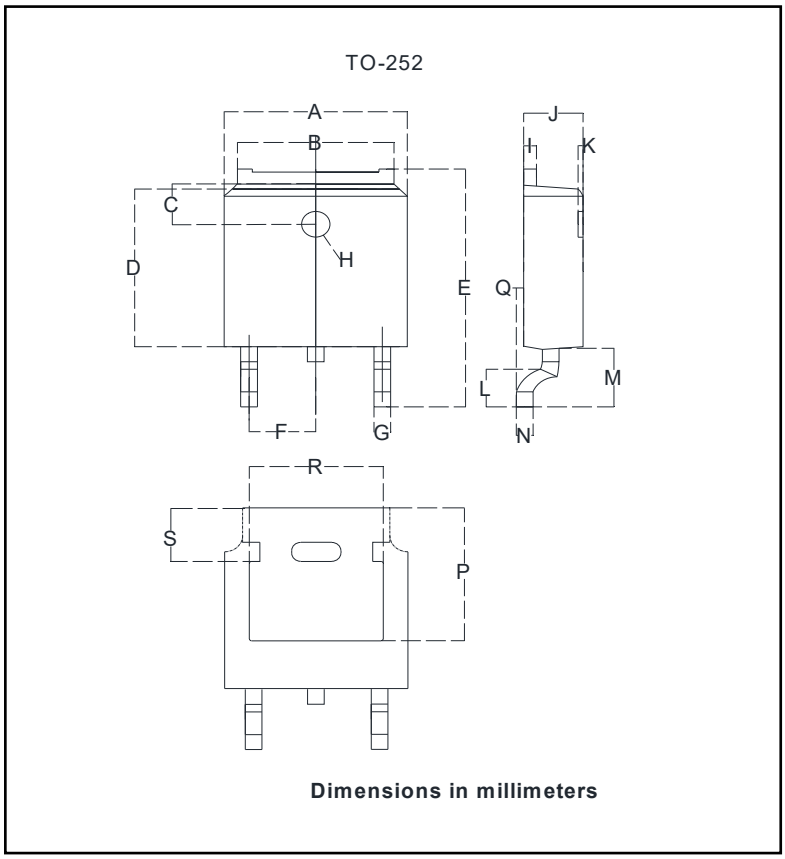


FIG.4: Typical Reverse Characteristics

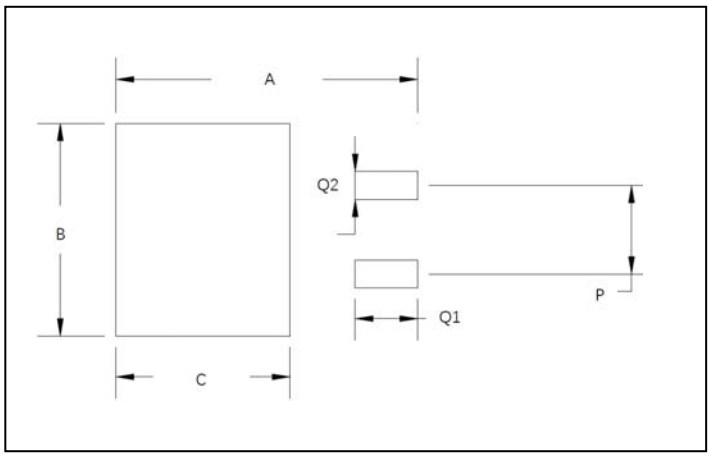


■Outline Dimensions



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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