Toohong

RB050L-40

Shottky barrier diode

●**Applications**

General rectification

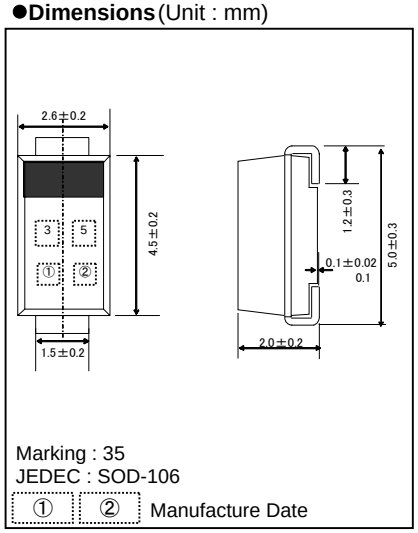
●**Features**

1) Small power mold type. (PMDS)
2) Low I_R
3) High reliability.

●**Construction**

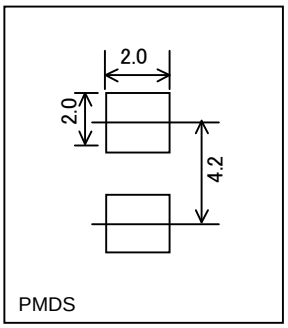
Silicon epitaxial planar

●**Dimensions** (Unit : mm)

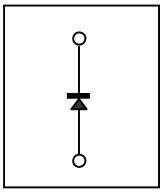


Marking : 35
JEDEC : SOD-106
① ② Manufacture Date

●**Land size figure** (Unit : mm)



●**Structure**



●**Absolute maximum ratings** (Ta=25°C)

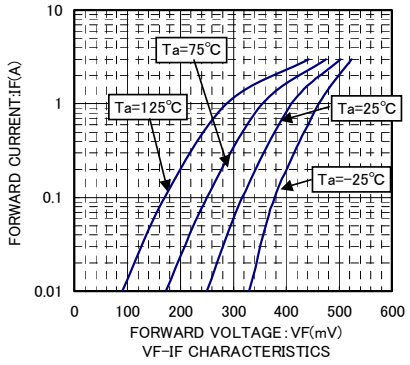
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	40	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward voltage	Io	3	A
Forward current surge peak (60Hz・1cyc)	I_{FSM}	70	A
Junction temperature	Tj	125	°C
Storage temperature	Tstg	−40 to +125	°C

(*1)Mounted on epoxy board. 180°Half sine wave

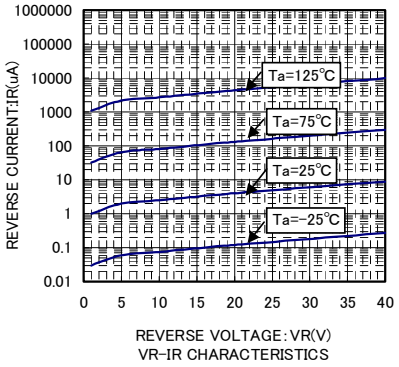
●**Electrical characteristics** (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F1	-	-	0.55	V	I_F=3.0A
	V_F2	-	-	0.50	V	I_F=1.5A
Reverse current	I_R	-	-	1	mA	V_R=40V

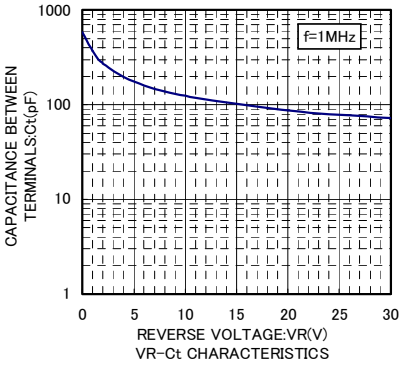
●Electrical characteristic curves (Ta=25°C)



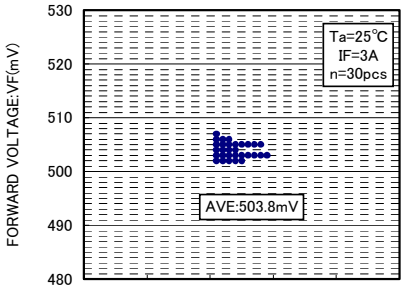
VF-IF CHARACTERISTICS



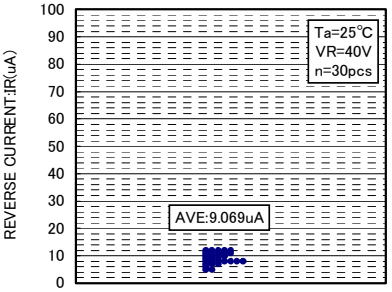
VR-IR CHARACTERISTICS



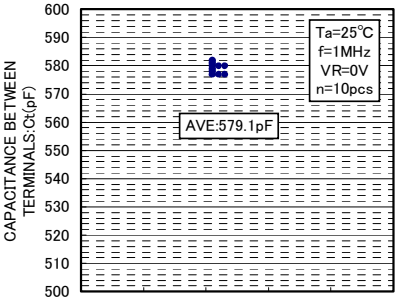
VR-Ct CHARACTERISTICS



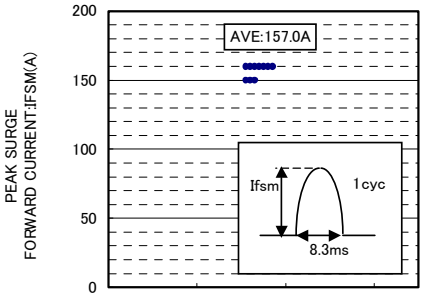
VF DISPERSION MAP



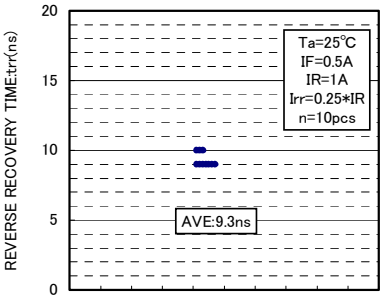
IR DISPERSION MAP



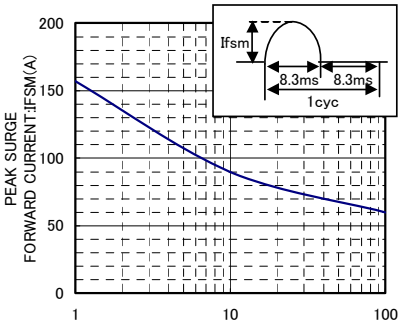
Ct DISPERSION MAP



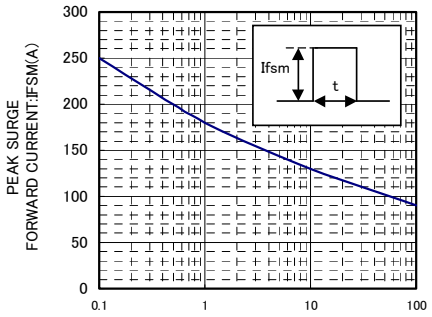
IFSM DISRESION MAP



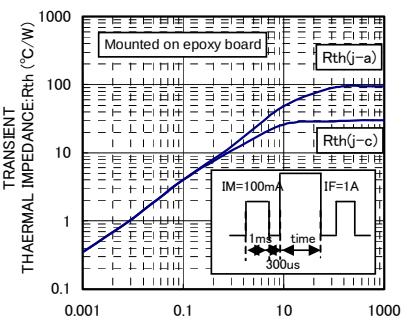
trr DISPERSION MAP



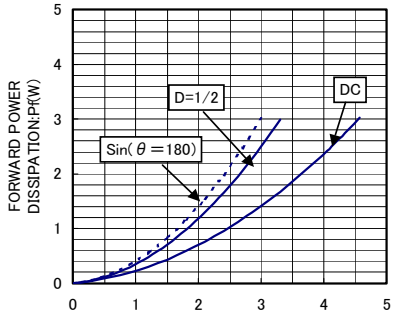
IFSM-CYCLE CHARACTERISTICS



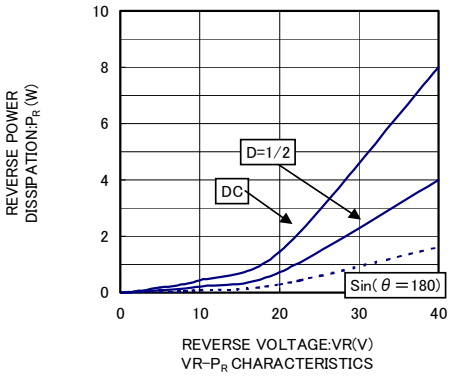
IFSM-t CHARACTERISTICS

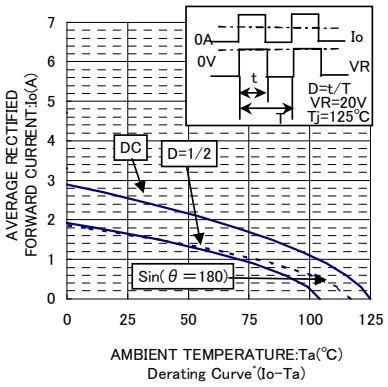


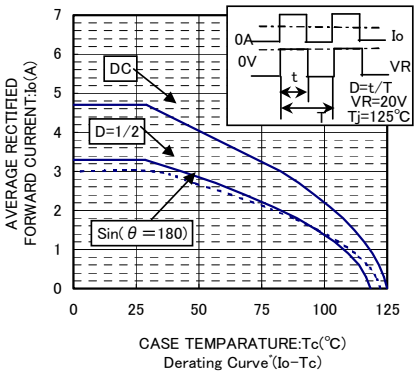
Rth-t CHARACTERISTICS

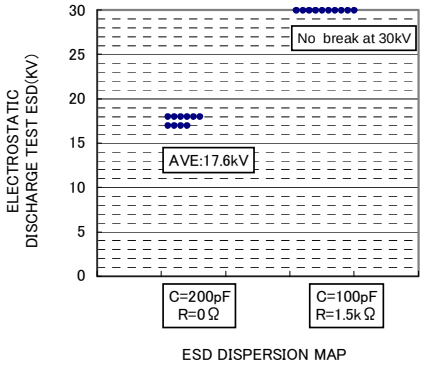


Io-Pf CHARACTERISTICS


REVERSE POWER DISSIPATION:P_R (W)
10
8
6
4
2
0
0
10
20
30
40
D=1/2
DC
Sin(θ =180)
REVERSE VOLTAGE:VR(V)
VR-P_R CHARACTERISTICS


AVERAGE RECTIFIED FORWARD CURRENT:Io(A)
7
6
5
4
3
2
1
0
0
25
50
75
100
125
0A
0V
Io
VR
t
T
D=t/T
VR=20V
Tj=125℃
DC
D=1/2
Sin(θ =180)
AMBIENT TEMPERATURE:Ta(℃)
Derating Curve(Io-Ta)


AVERAGE RECTIFIED FORWARD CURRENT:Io(A)
7
6
5
4
3
2
1
0
0
25
50
75
100
125
0A
0V
Io
VR
t
T
D=t/T
VR=20V
Tj=125℃
DC
D=1/2
Sin(θ =180)
CASE TEMPARATURE:Tc(℃)
Derating Curve(Io-Tc)


ELECTROSTATIC DISCHARGE TEST ESD(KV)
30
25
20
15
10
5
0
No break at 30kV
AVE:17.6kV
C=200pF
R=0Ω
C=100pF
R=1.5kΩ
ESD DISPERSION MAP