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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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1SS81

Silicon Epitaxial Planar Diode for High Voltage Switching

REJ03G0561-0300
 (Previous: ADE-208-148B)
 Rev.3.00
 Mar 22, 2005

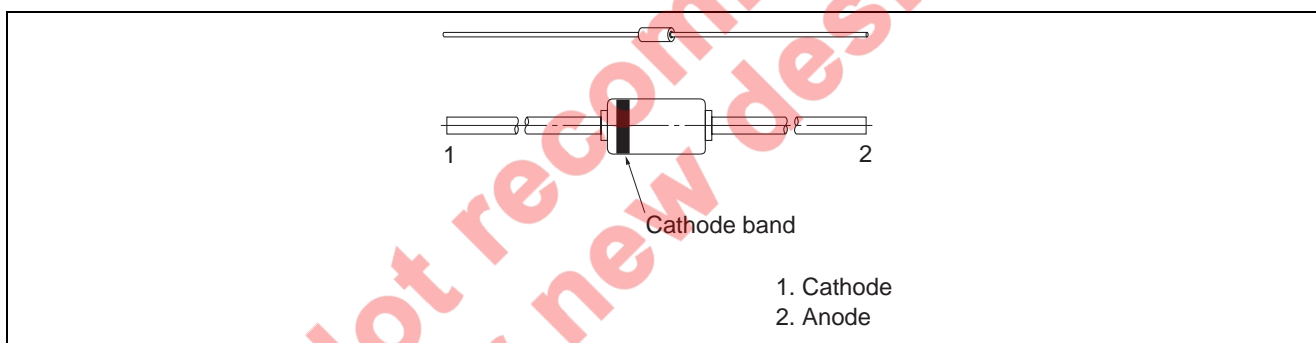
Features

- High reverse voltage. ($V_R = 150\text{ V}$)
- High reliability with glass seal.

Ordering Information

Type No.	Cathode band	Package Name	Package Code (Previous Code)
1SS81	Verdure	DO-35	GRZZ0002ZB-A (DO-35)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}^{*1}	200	V
Reverse voltage	V_R	150	V
Average rectified current	I_o	200	mA
Peak forward current	I_{FM}	625	mA
Non-Repetitive peak forward surge current	I_{FSM}^{*2}	1	A
Power dissipation	P_d	400	mW
Junction temperature	T_j	175	°C
Storage temperature	T_{stg}	-65 to +175	°C

Notes: 1. Reverse voltage in excess of peak reverse voltage may deteriorate electrical characteristic.
2. Within 1s forward surge current.

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	200	nA	$V_R = 150\text{ V}$
	I_{R2}	—	—	100	μA	$V_R = 200\text{ V}$
Forward voltage	V_F	—	—	1.0	V	$I_F = 100\text{ mA}$
Capacitance	C	—	1.5	—	pF	$V_R = 0\text{ V}, f = 1\text{ MHz}$
Reverse recovery time	t_{rr}	—	—	100	ns	$I_F = I_R = 30\text{ mA}, I_{rr} = 3\text{ mA}, R_L = 100\ \Omega$

Not recommended for new designs

Main Characteristic

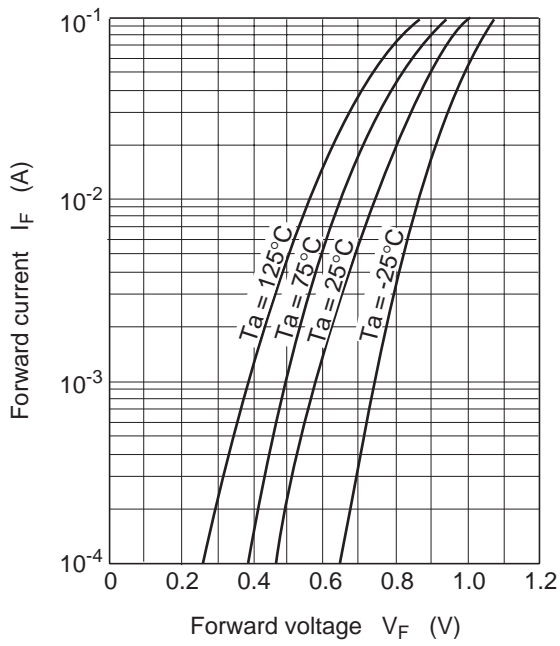


Fig.1 Forward current vs. Forward voltage

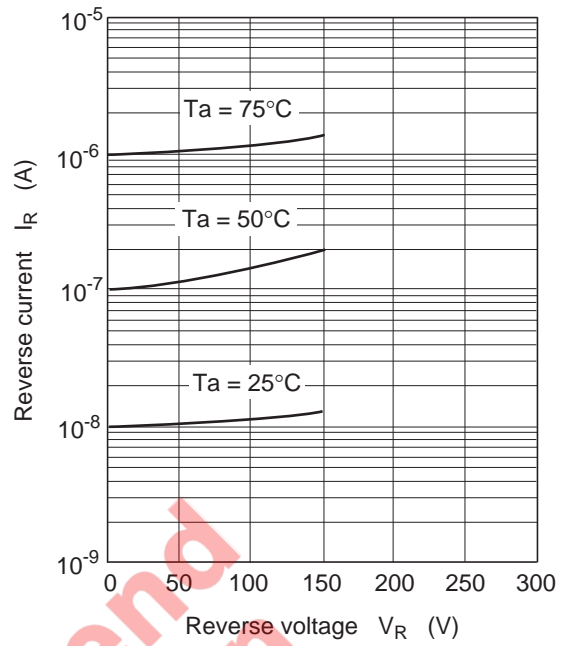


Fig.2 Reverse current vs. Reverse voltage

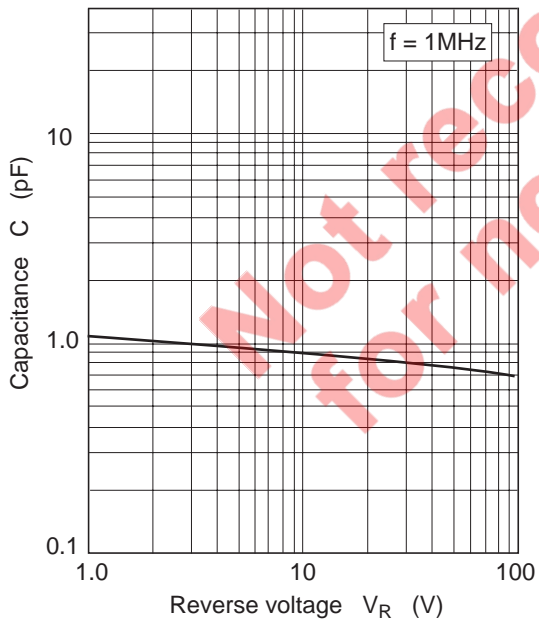
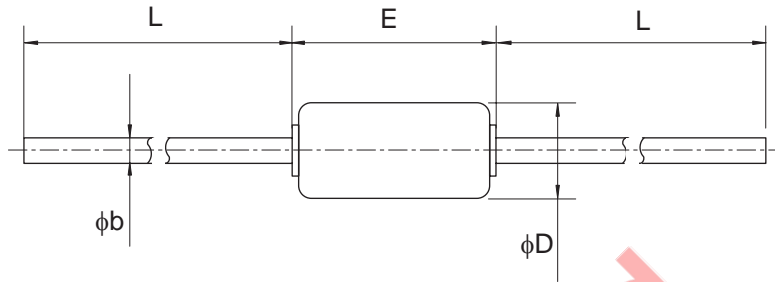


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-40	GRZ2000ZZB-A	DO-35 / DO-35V	0.13g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
ϕb	-	0.5	-
ϕD	-	2.0	-
E	-	-	4.2
L	26.0	-	-

Not recommend for new design

Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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