

1SS83

Silicon Epitaxial Planar Diode for High Voltage Switching

REJ03G0563-0300
(Previous: ADE-208-150B)
Rev.3.00
Apr 18, 2005

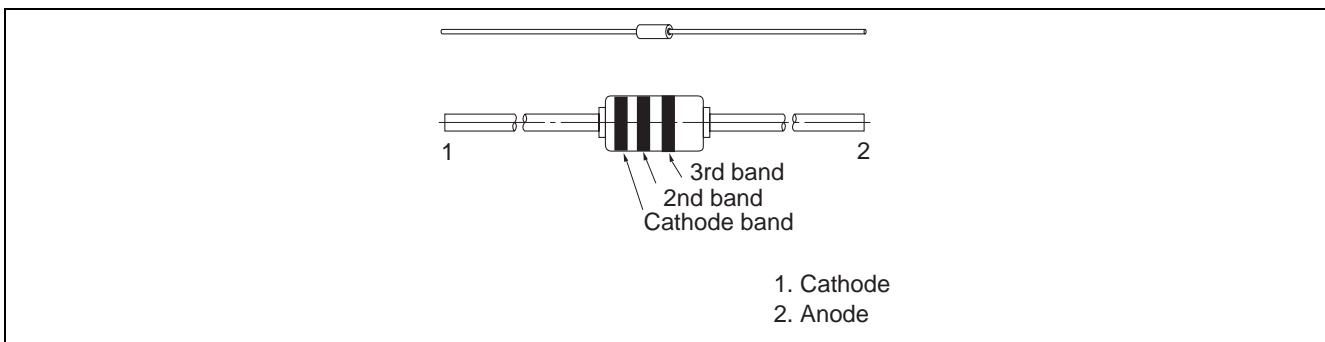
Features

- High reverse voltage. ($V_R = 250\text{ V}$)
- High reliability with glass seal.

Ordering Information

Type No.	Cathode band	2nd band	3rd band	Package Name	Package Code (Previous Code)
1SS83	Verdure	Light Blue	Light Blue	DO-35	GRZZ0002ZB-A (DO-35)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}^{*1}	300	V
Reverse voltage	V_R	250	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	$V_R = 250\text{ V}$
	I_{R2}	—	—	100	μA	$V_R = 300\text{ V}$
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	$I_F = I_R = 30\text{ mA}, I_{rr} = 3\text{ mA}, R_L = 100\ \Omega$

Main Characteristic

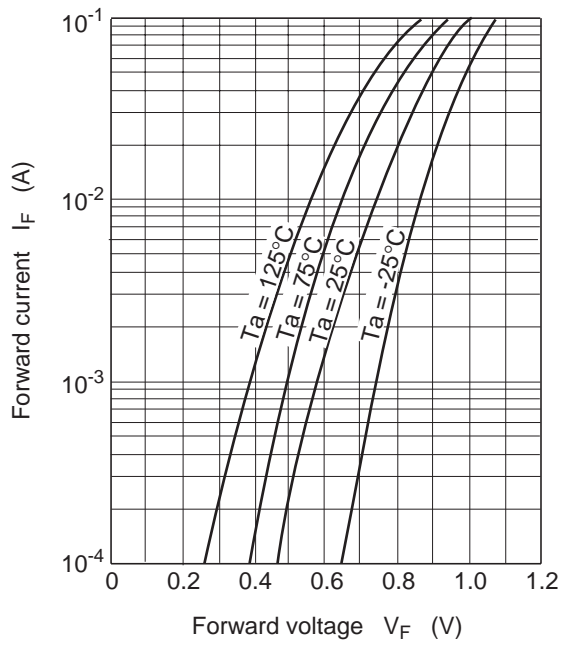


Fig.1 Forward current vs. Forward voltage

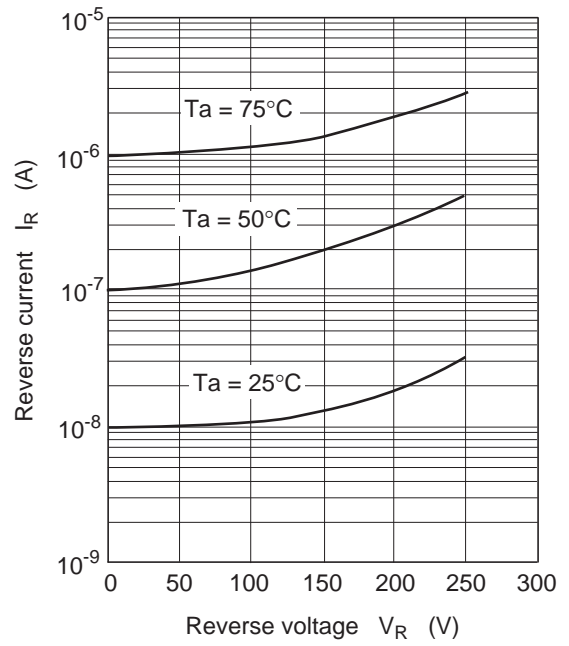


Fig.2 Reverse current vs. Reverse voltage

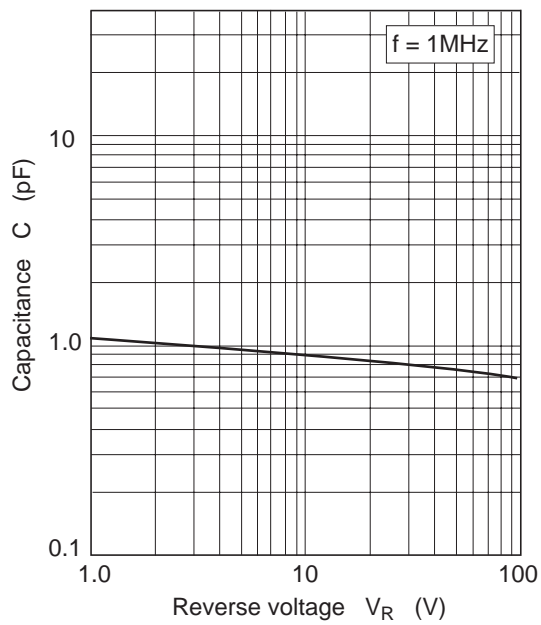


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-40	GRZZ000ZZB-A	DO-35 / DO-35V	0.13g

The diagram shows a side view of the SC-40 package. It features a central rectangular body with a diameter of ϕD and a length of E . This central body is flanked by two leads, each with a length of L and a diameter of ϕb . The leads are shown with break symbols to indicate they are longer than drawn.

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

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