HSB83YP

Silicon Epitaxial Planar Diode for High Voltage Switching

REJ03G0545-0100
(Previous: ADE-208-843)
Rev.1.00
Mar 04, 2005

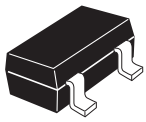
Features

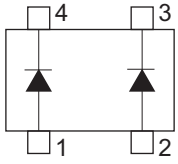
- High reverse voltage. (V_R = 250 V)
- CMPAK- 4 package which has two devices parallel connection, is suitable for high density surface mounting.

Ordering Information

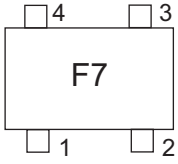
Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HSB83YP	F7	CMPAK-4	PTSP0004ZB-A (CMPAK-4)

Pin Arrangement





(Top View)



(Top View)

1. Anode
2. Anode
3. Cathode
4. Cathode

Absolute Maximum Ratings *[2]

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	300	V
Reverse voltage	V_R	250	V
Peak forward current	I_{FM}	300	mA
Non-Repetitive peak forward surge current	I_{FSM} *[1]	2	A
Average rectified current	I_O	100	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Notes: 1. Value at duration of 10 ms.
2. Two device total.

Electrical Characteristics *

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.2	V	I_F = 100 mA
Reverse current	I_{R1}	—	—	0.2	μA	V_R = 250 V
	I_{R2}	—	—	100		V_R = 300 V
Capacitance	C	—	—	3.0	pF	V_R = 0 V, f = 1 MHz
Reverse recovery time	t_{rr}	—	—	100	ns	I_F = I_R = 30 mA, I_{rr} = 3 mA, R_L= 100 Ω

Note: Per one device.

Main Characteristic

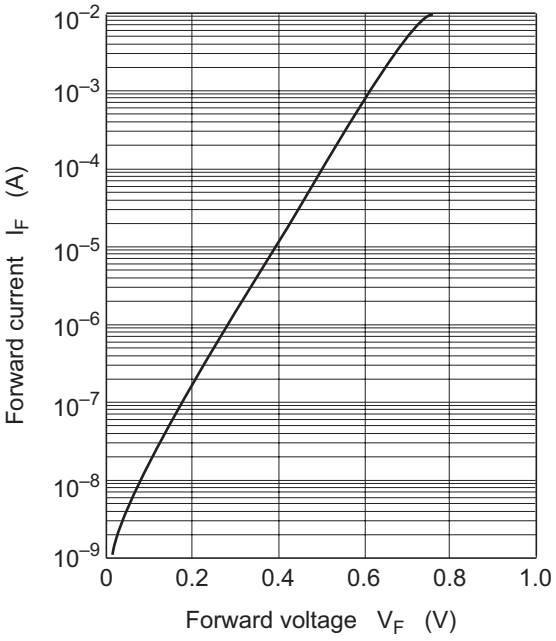


Fig.1 Forward current vs. Forward voltage

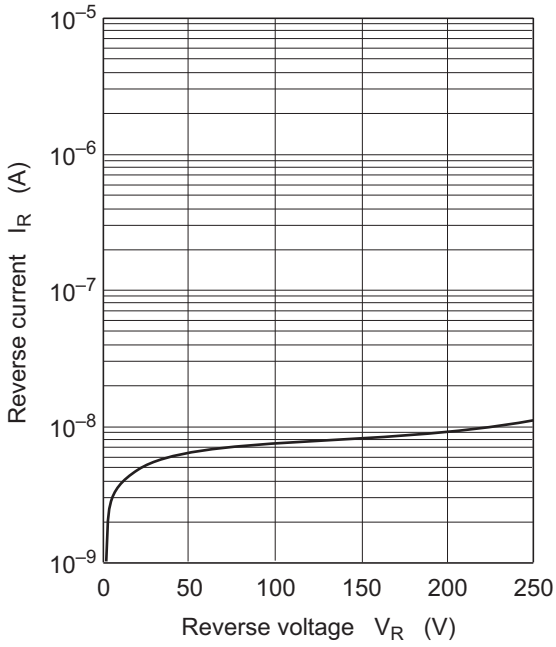


Fig.2 Reverse current vs. Reverse voltage

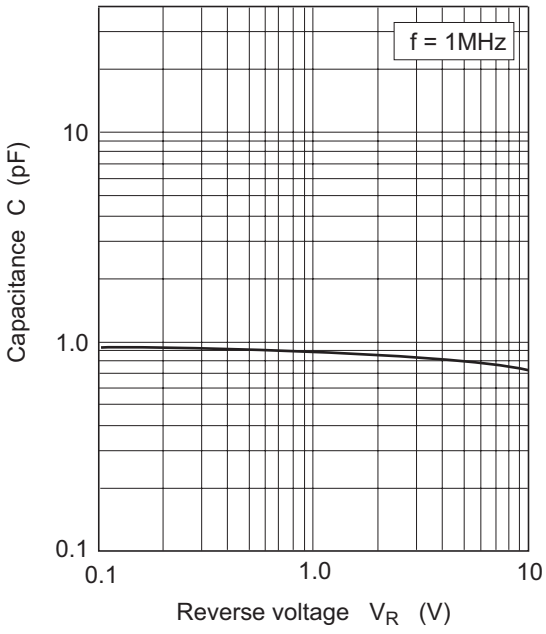
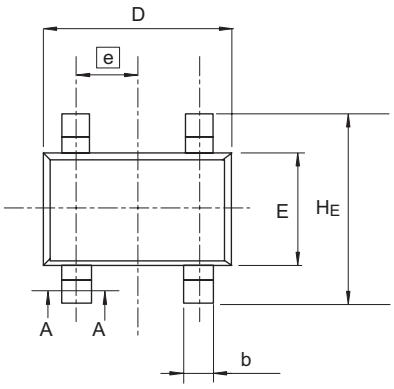
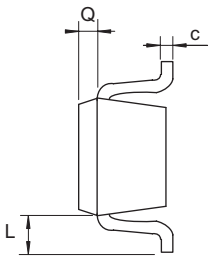


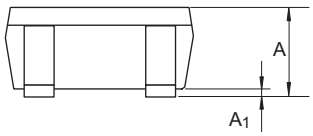
Fig.3 Capacitance vs. Reverse voltage

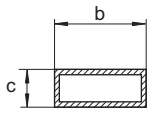
Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-82	PTSP0004ZB-A	CMPAK-4(D) / CMPAK-4(D)V	0.006g

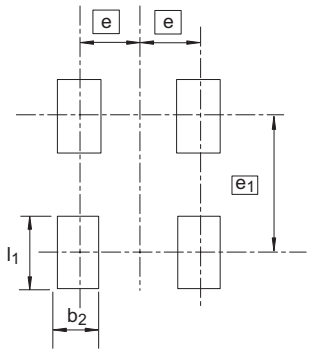








A — A Section



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.8	0.9	1.0
A_1	0	-	0.1
b	0.25	0.3	0.35
c	0.1	0.16	0.26
D	1.8	2.0	2.2
E	1.15	1.25	1.35
e	-	0.65	-
H_E	1.9	2.1	2.3
L	-	0.425	-
b_2	-	-	0.45
e_1	-	1.5	-
l_1	-	-	0.9
Q	-	0.2	-

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Colophon 2.0