HSB123

Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0546-0200
(Previous: ADE-208-487A)
Rev.2.00
Mar 04, 2005

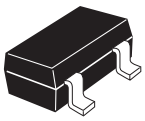
Features

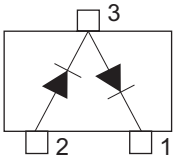
- Low capacitance, proof against high voltage.
- Fast recovery time.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HSB123	A9	CMPAK	PTSP0003ZB-A (CMPAK)

Pin Arrangement





(Top View)

1. Cathode
2. Anode
3. Cathode
   Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Peak forward current	I_{FM} *[1]	300	mA
Non-Repetitive peak forward surge current	I_{FSM} *[2]	4	A
Average rectified current	I_O *[1]	100	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Notes: 1. Two device total.
2. Value at duration of 1 μs, two device total.

Electrical Characteristics *

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	—	—	1.0	V	I_F = 10 mA
	V_{F2}	—	—	1.0		I_F = 50 mA
	V_{F3}	—	—	1.2		I_F = 100 mA
Reverse current	I_R	—	—	0.1	μA	V_R = 80 V
Capacitance	C	—	—	2.0	pF	V_R = 0 V, f = 1 MHz
Reverse recovery time	t_{rr}	—	—	3.0	ns	I_F = 10 mA, V_R = 6 V, R_L = 50 Ω

Note: Per one device.

Main Characteristic

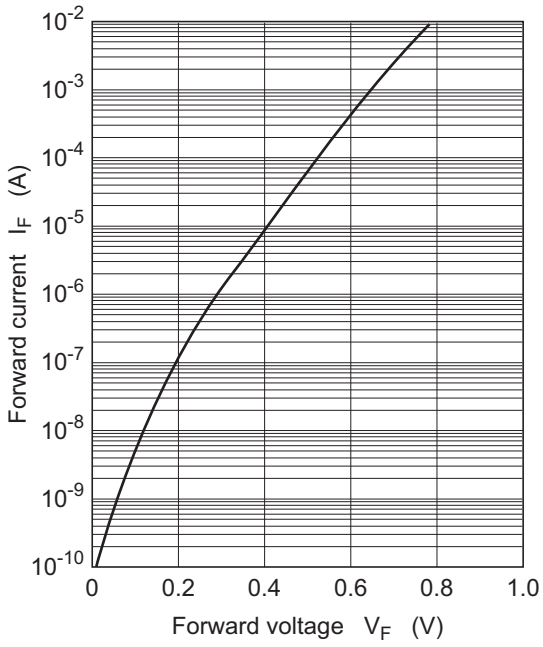


Fig.1 Forward current vs. Forward voltage

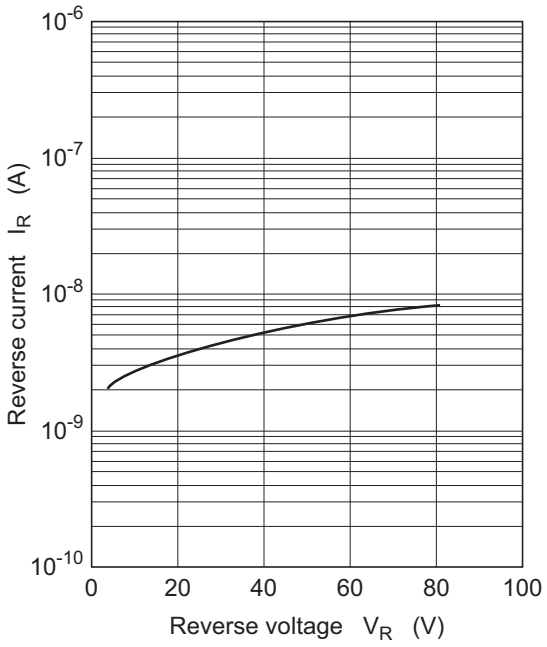


Fig.2 Reverse current vs. Reverse voltage

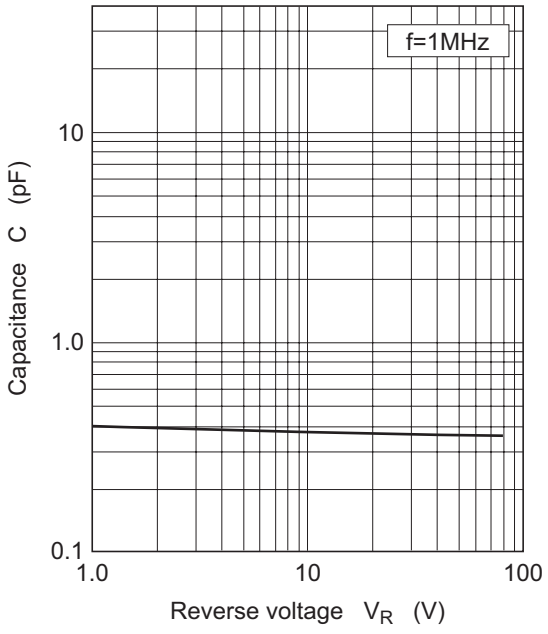
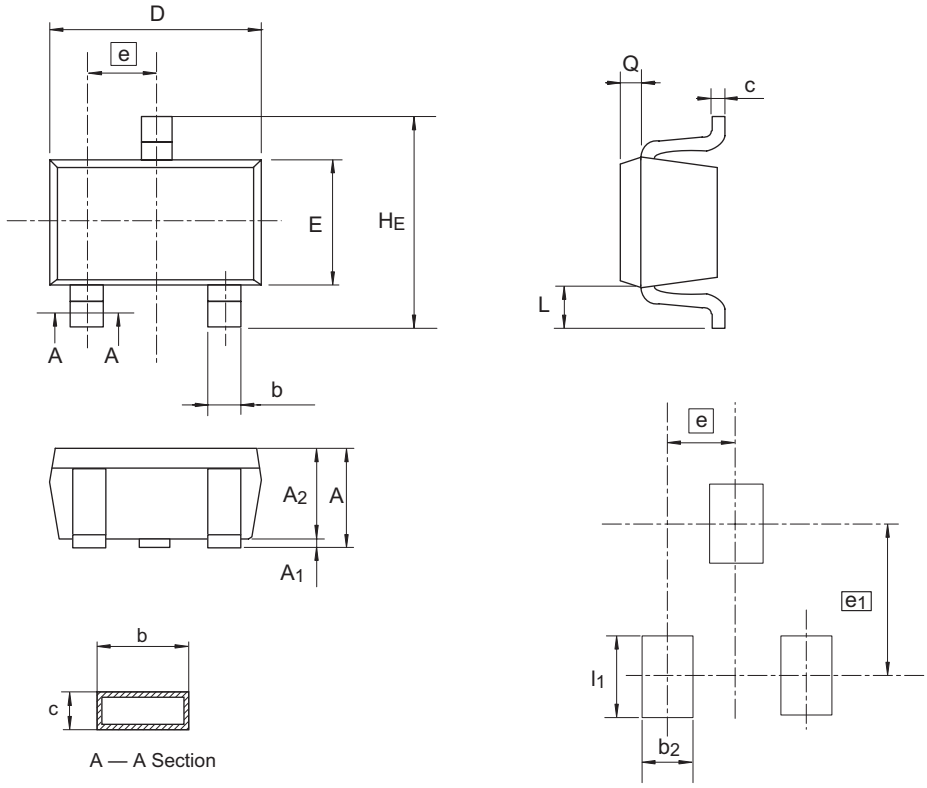


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-70	PTSP0003ZB-A	CMPAK / CMPAKV	0.006g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.8	-	1.1
A_1	0	-	0.1
A_2	0.8	0.9	1.0
b	0.25	0.3	0.4
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	1.8	2.1	2.4
L	-	0.425	-
b_2	-	-	0.45
e_1	-	1.5	-
l_1	-	-	0.9
Q	-	0.2	-

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