HSB83

Silicon Epitaxial Planar Diode for High Voltage Switching

REJ03G0187-0300
Rev.3.00
Jan 07, 2009

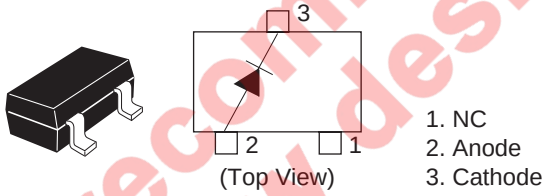
Features

- High reverse voltage. (V_R = 250V)
- CMPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Part No	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
HSB83TL	F7	CMPAK	PTSP0003ZB-A	TL (3,000 pcs / reel)
HSB83TR	F7	CMPAK	PTSP0003ZB-A	TR (3,000 pcs / reel)

Pin Arrangement



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Absolute Maximum Ratings

(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	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at duration of 10 ms.

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	µA	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

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Main Characteristics

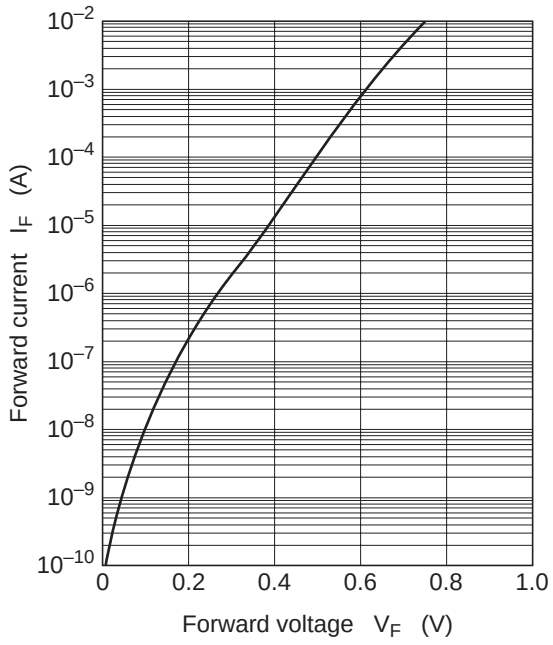

Fig.1 Forward current vs. Forward voltage

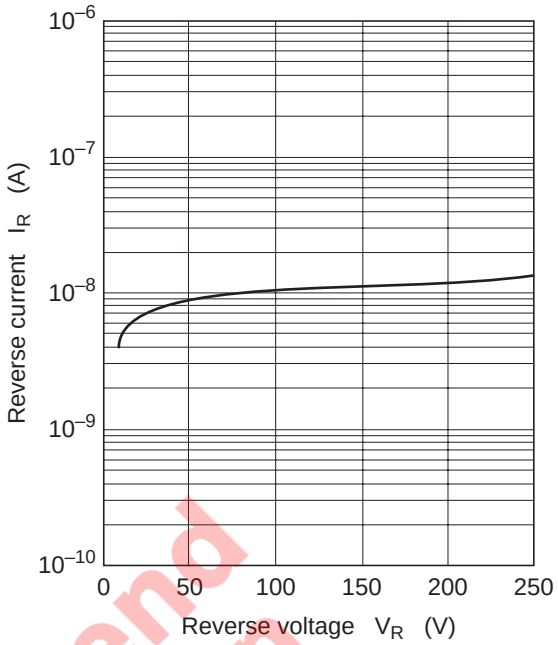

Fig.2 Reverse current vs. Reverse voltage

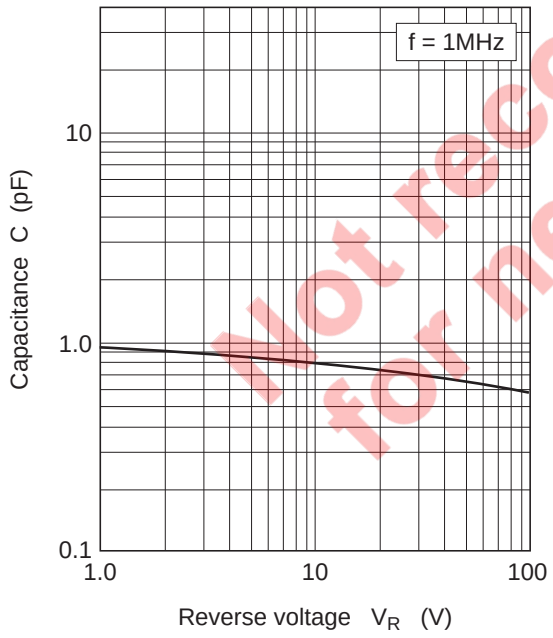

Fig.3 Capacitance vs. Reverse voltage

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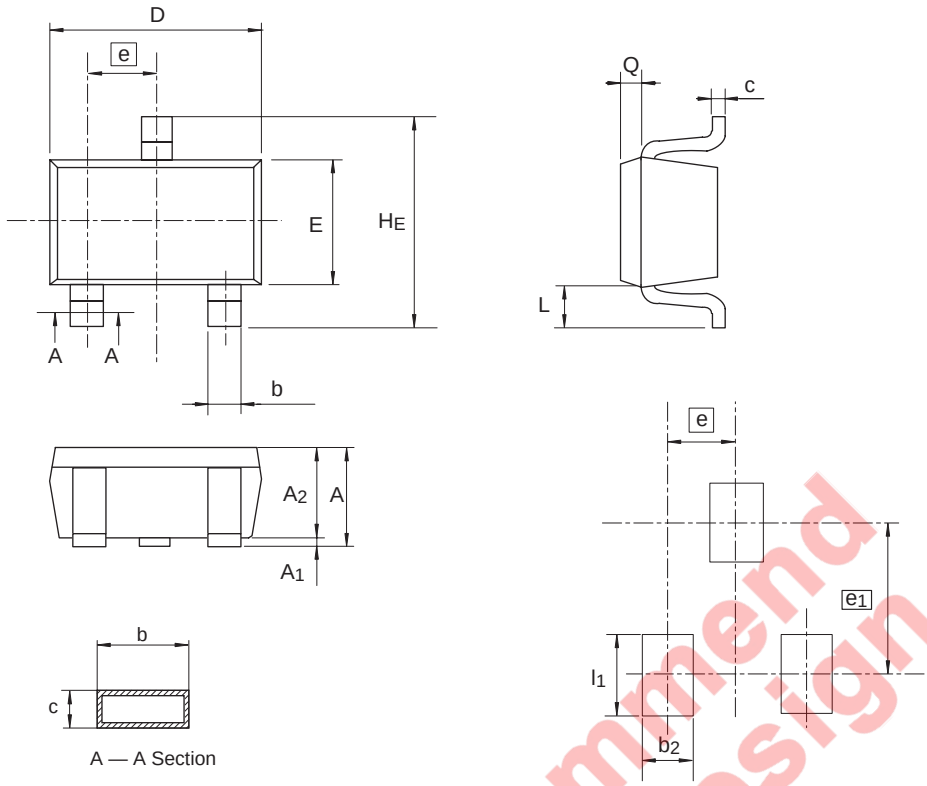
Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
CMPAK	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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