
HSB83J

Silicon Epitaxial Planar Diode for High Voltage Switching

HITACHI

ADE-208-489(Z)
Rev 0

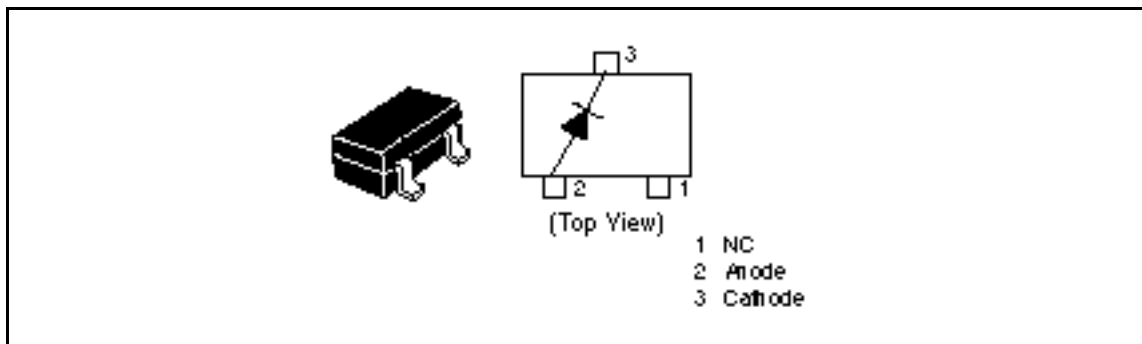
Features

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

Ordering Information

Type No.	Laser Mark	Package Code
HSB83J	F7	CMPAK

Outline



HSB83J

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	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Note: 1. Value at duration of 10msec.

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.2	V	$I_F = 100 \text{ mA}$
Reverse current	I_{R1}	—	—	0.2	μA	$V_R = 250\text{V}$
	I_{R2}	—	—	100		$V_R = 300\text{V}$
Capacitance	C	—	—	3.0	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

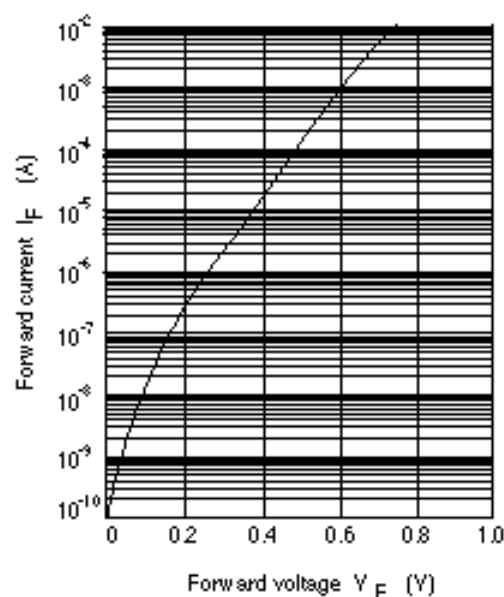


Fig.1 Forward current Vs. Forward voltage

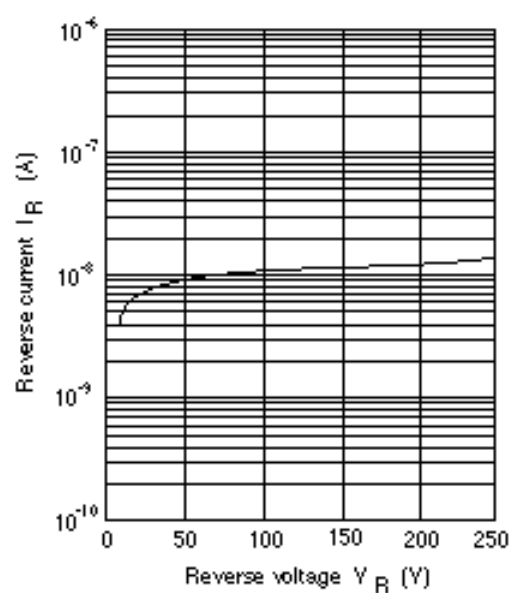


Fig.2 Reverse current Vs. Reverse voltage

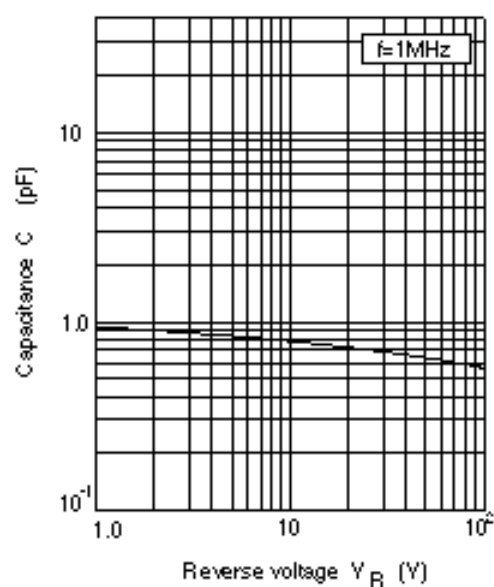


Fig.3 Capacitance Vs. Reverse voltage

Unit : mm

The drawing shows the F7 package with the following dimensions and features:

- Top View:**
 - Overall width: 2.0 ± 0.2
 - Overall length: 1.3 ± 0.2
 - Pin 1 width: 0.3 ± 0.1 (tolerance -0.05)
 - Pin 2 width: 0.3 ± 0.1 (tolerance -0.05)
 - Pin 3 width: 0.3 ± 0.1 (tolerance -0.05)
 - Pin 1 to Pin 2 distance: 0.65
 - Pin 2 to Pin 3 distance: 0.65
 - Distance from Pin 3 to right edge: 0.65
 - Distance from Pin 1 to top edge: 0.3 ± 0.1 (tolerance -0.05)
 - Distance from Pin 2 to top edge: 0.3 ± 0.1 (tolerance -0.05)
 - Distance from Pin 3 to top edge: 0.3 ± 0.1 (tolerance -0.05)
 - Distance from Pin 1 to center: 1.25 ± 0.1
 - Distance from Pin 2 to center: 1.25 ± 0.1
 - Distance from Pin 3 to center: 1.25 ± 0.1
 - Distance from Pin 1 to right edge: 2.1 ± 0.3
 - Distance from Pin 2 to right edge: 2.1 ± 0.3
 - Distance from Pin 3 to right edge: 2.1 ± 0.3
 - Distance from Pin 1 to bottom edge: 0.9 ± 0.1
 - Distance from Pin 2 to bottom edge: 0.9 ± 0.1
 - Distance from Pin 3 to bottom edge: 0.9 ± 0.1
- Side View:**
 - Package height: 0.16 ± 0.1 (tolerance -0.05)
 - Pin height: $0 - 0.1$
- Pinout Table:**

Hitachi Code	CMPAK
JEDEC Code	—
EIAJ Code	SC-70
Weight (g)	0.006