

# HSC119

Silicon Epitaxial Planar Diode for High Speed Switching

# HITACHI

ADE-208-615 (Z)

Rev 0

Apr. 1998

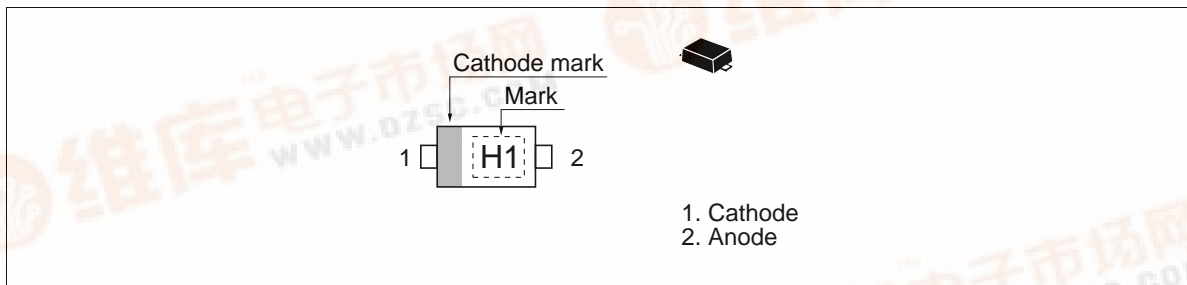
## Features

- Low capacitance. ( $C=2.0\text{pF}$  max)
- Short reverse recovery time. ( $t_{rr}=3.0\text{ns}$  max)
- Ultra small Elat Package (UFP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HSC119	H1	UFP

## Outline



## HSC119

### Absolute Maximum Ratings (Ta = 25°C)

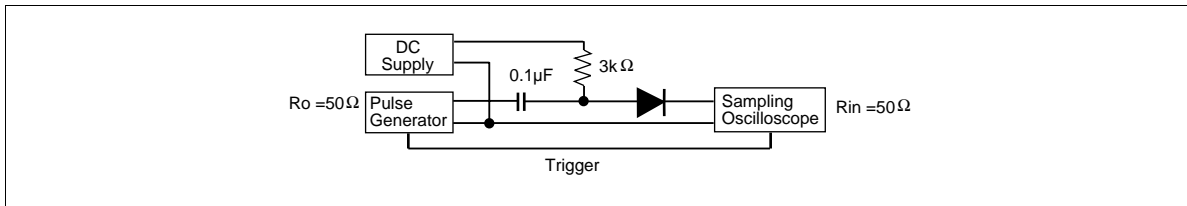
Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Average forward current	$I_O$	100	mA
Peak rectified current	$I_{FM}$	300	mA
Non-Repetitive peak forward surge current	$I_{FSM}^{*1}$	4	A
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

Note 1. Within 1μs forward surge current.

### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_{F1}$	—	—	0.8	V	$I_F = 10 \text{ mA}$
	$V_{F2}$	—	—	1.2		$I_F = 100 \text{ mA}$
Reverse current	$I_R$	—	—	0.1	μA	$V_R = 80 \text{ V}$
Capacitance	$C$	—	—	2.0	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Reverse recovery time <sup>*1</sup>	$t_{rr}$	—	—	3.0	ns	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 50 \Omega$

Notes 1. Reverse recovery time test circuit



## Main Characteristic

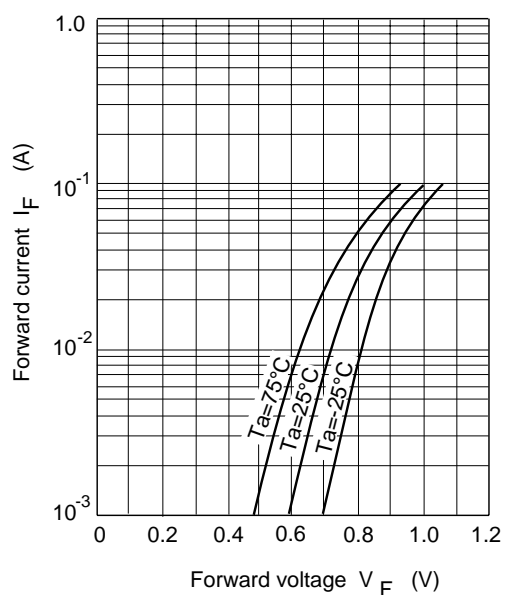


Fig.1 Forward current Vs. Forward voltage

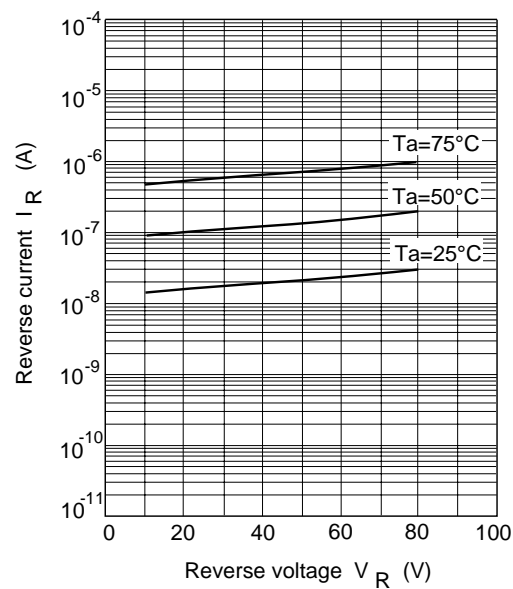


Fig.2 Reverse current Vs. Reverse voltage

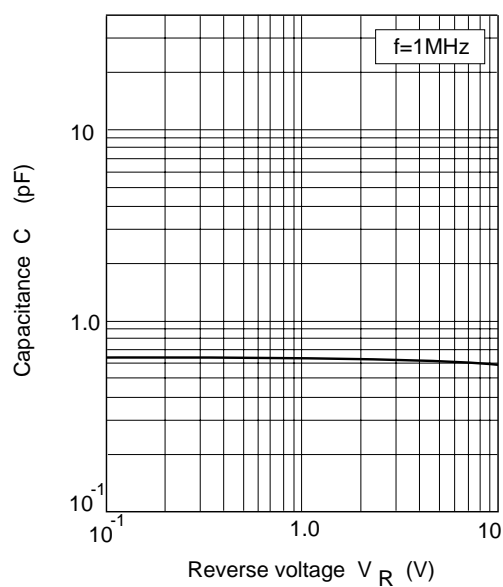
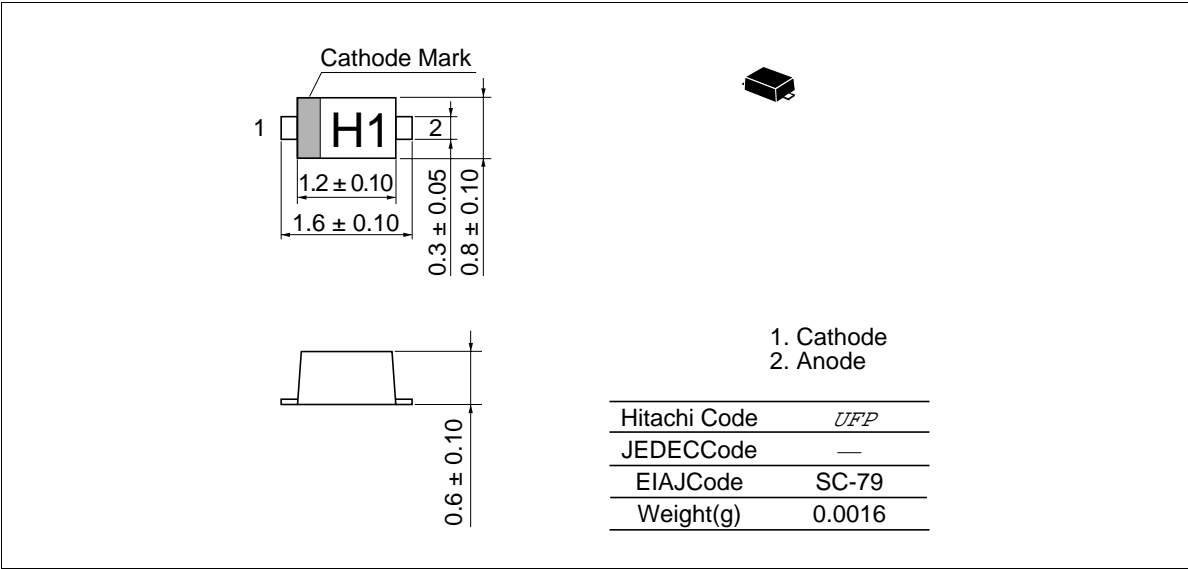


Fig.3 Capacitance Vs. Reverse voltage

HSC119

Package Dimensions

Unit : mm



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