

# HSC119

## Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0188-0100Z  
(Previous: ADE-208-615)  
Rev.1.00  
Mar.22.2004

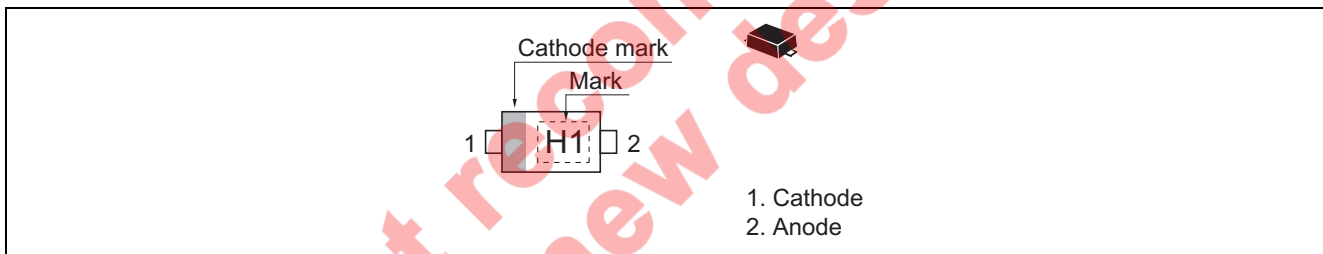
### Features

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

### Ordering Information

Type No.	Laser Mark	Package Code
HSC119	H1	UFP

### Pin Arrangement



## 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	$I_{FM}$	300	mA
Non-Repetitive peak forward surge current	$I_{FSM}^{*1}$	4	A
Average rectified current	$I_O$	100	mA
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

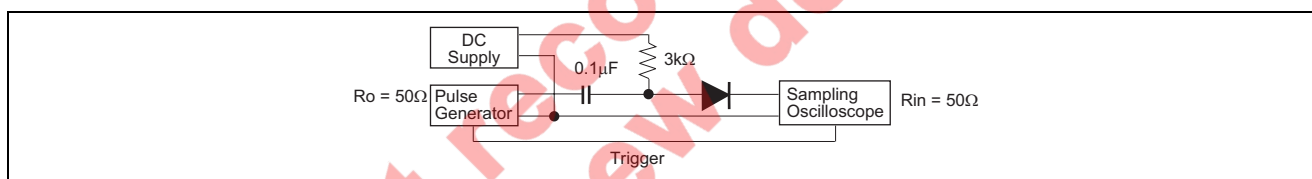
Note: 1. Within 1μs forward surge current.

## 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	V	$I_F = 100 \text{ mA}$
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	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 50 \Omega$

Note: 1. Reverse recovery time test circuit



## Main Characteristics

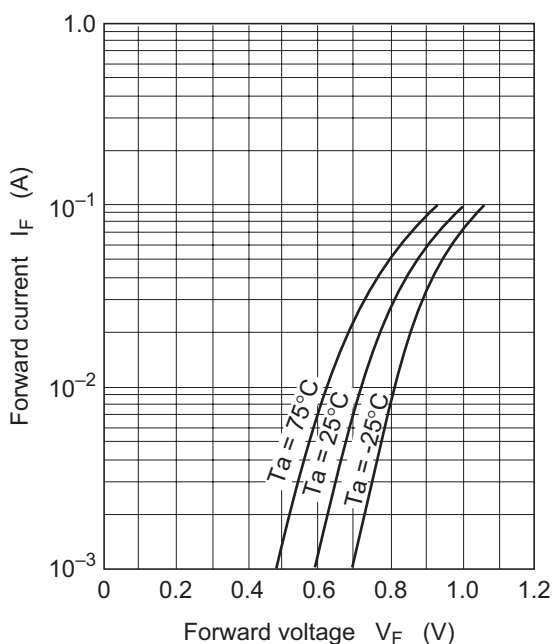


Fig.1 Forward current vs. Forward voltage

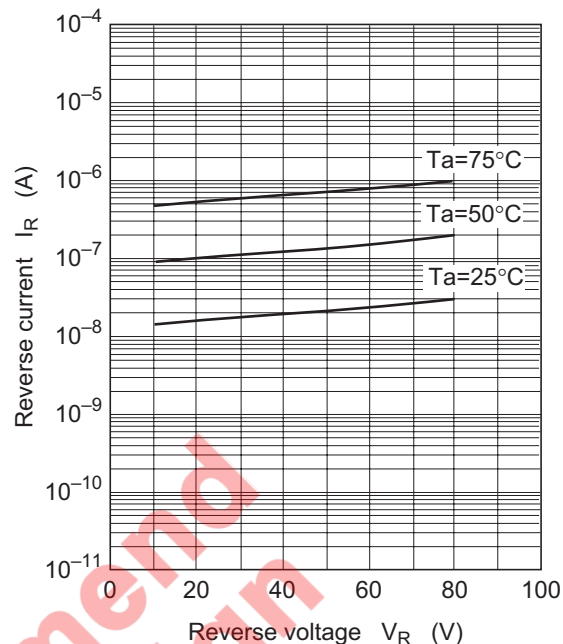


Fig.2 Reverse current vs. Reverse voltage

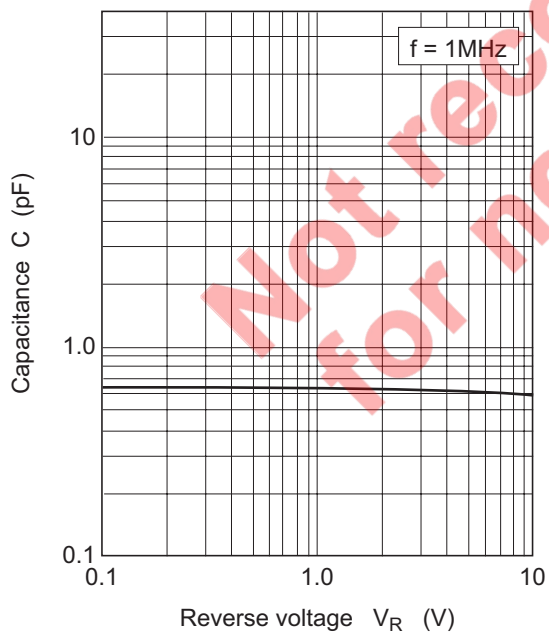
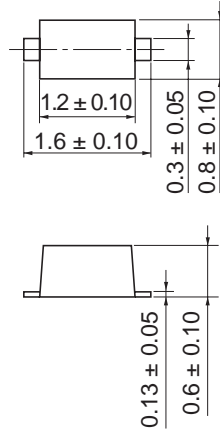


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

As of January, 2003  
Unit: mm



Package Code	UFP
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.0016 g

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