

HSU119

Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0190-0200

Rev.2.00

Feb 04, 2009

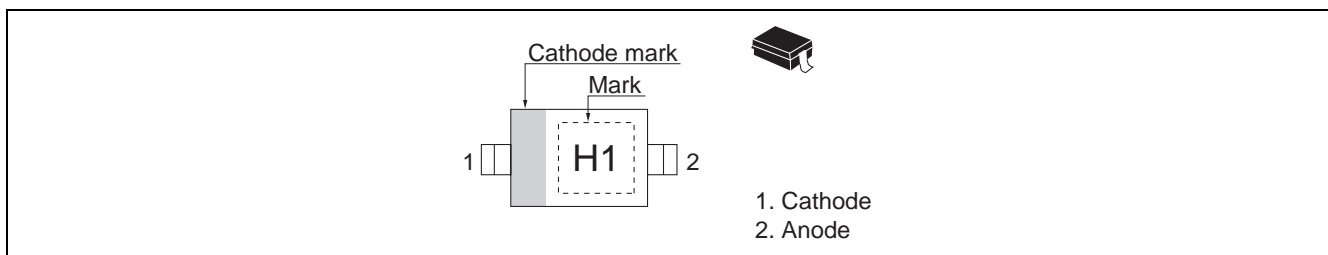
Features

- Low capacitance. ($C = 2.0 \text{ pF max}$)
- Short reverse recovery time. ($t_{rr} = 3.0 \text{ ns max}$)
- Lineup of environmental friendly Halogen free type (HSU119-N)
- Ultra small Resin Package (URP) is suitable for compact and high-density surface mount design.

Ordering Information

Part No.	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
HSU119TRF	H1	URP	PTSP0002ZA-A	TRF (3,000 pcs / reel)
HSU119-NTRF (Halogen-free type)				

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

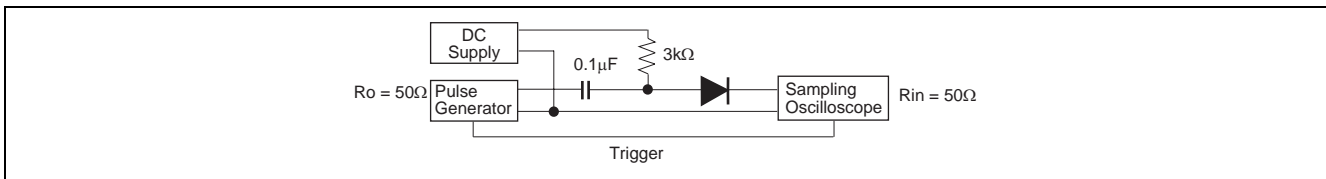
Note: 1. Within 1µs forward surge current.

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* ¹	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

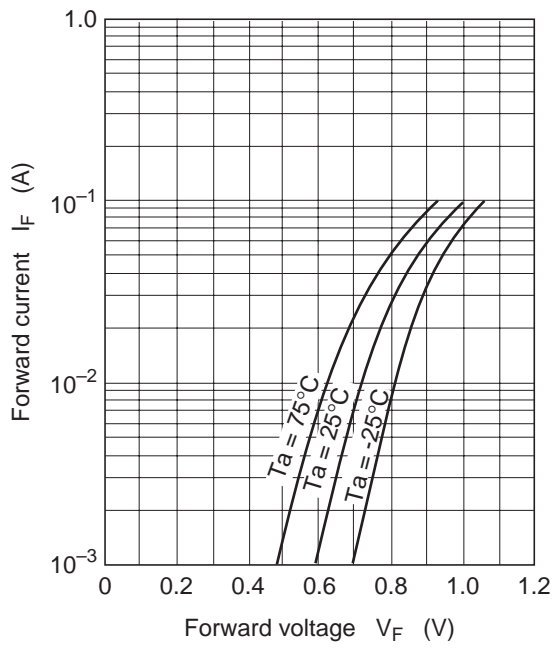


Fig.1 Forward current vs. Forward voltage

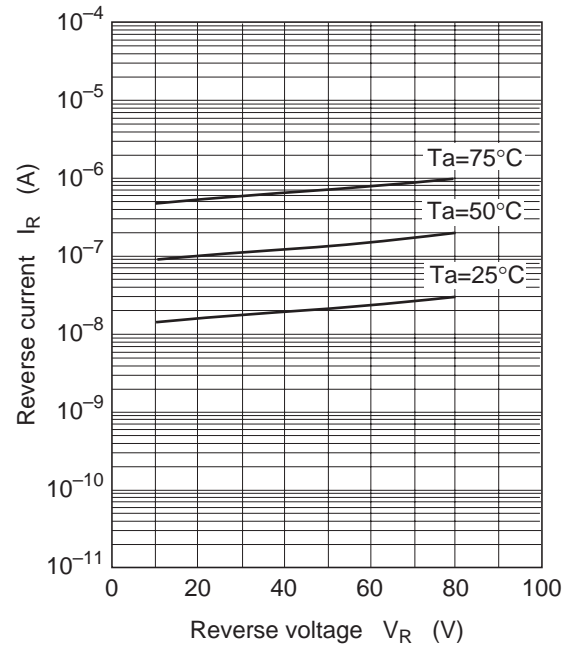


Fig.2 Reverse current vs. Reverse voltage

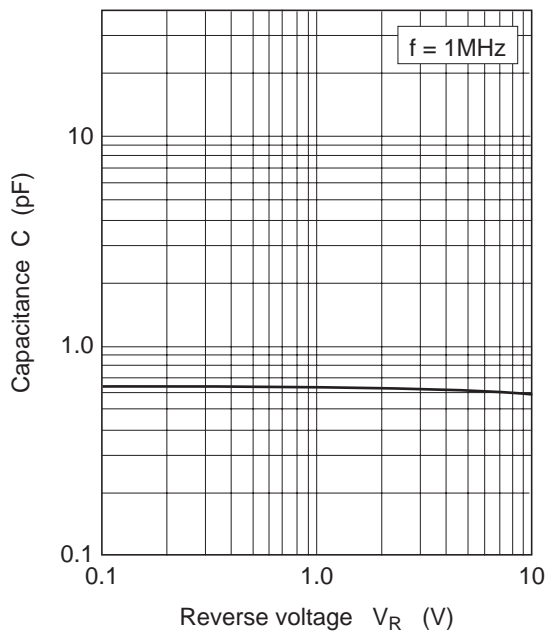
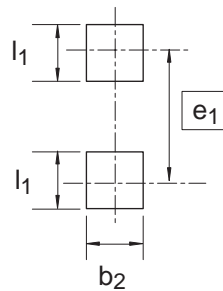
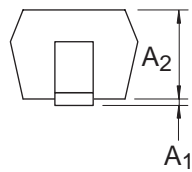
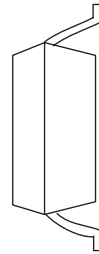
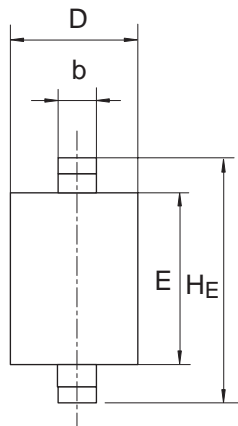


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
URP	SC-76A	PTSP0002ZA-A	URP / URPV	0.004g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A ₁	0	-	0.1
A ₂	0.75	0.90	1.05
b	0.15	0.30	0.45
D	1.10	1.25	1.40
E	1.55	1.70	1.85
HE	2.35	2.50	2.65
b ₂	-	0.80	-
e ₁	-	2.30	-
l ₁	-	0.80	-

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April 1st, 2010
Renesas Electronics Corporation

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