

# HVU145

Silicon Epitaxial Planar Pin Diode for High Frequency Switching

# HITACHI

ADE-208-1508A (Z)

Rev.1  
Jun. 2002

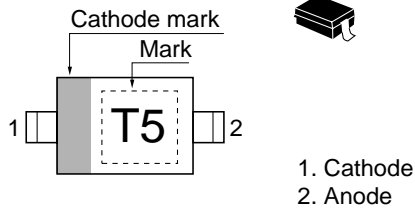
## Features

- Low capacitance. ( $C = 0.45 \text{ pF max}$ )
- Low forward resistance. ( $r_f = 1.8 \Omega \text{ max}$ )
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HVU145	T5	URP

## Pin Arrangement



## Absolute Maximum Ratings

( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	60	V
Forward current	$I_F$	50	mA
Power dissipation	$P_d$	150	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

## Electrical Characteristics

( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	$I_R$	—	—	100	nA	$V_R = 60\text{ V}$
Forward voltage	$V_F$	—	—	0.9	V	$I_F = 2\text{ mA}$
Capacitance	C	—	—	0.45	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
Forward resistance	$r_f$	—	—	1.8	$\Omega$	$I_F = 10\text{ mA}, f = 100\text{ MHz}$
ESD-Capability *1	—	100	—	—	V	C = 200 pF, R = 0 $\Omega$ , Both forward and reverse direction 1 pulse.

Note : 1. Failure criterion ;  $I_R \geq 100\text{ nA}$  at  $V_R = 60\text{ V}$

Main Characteristic

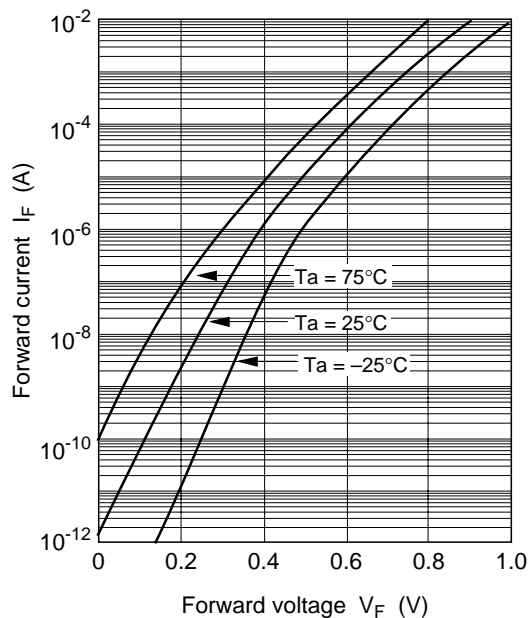


Fig.1 Forward current vs. Forward voltage

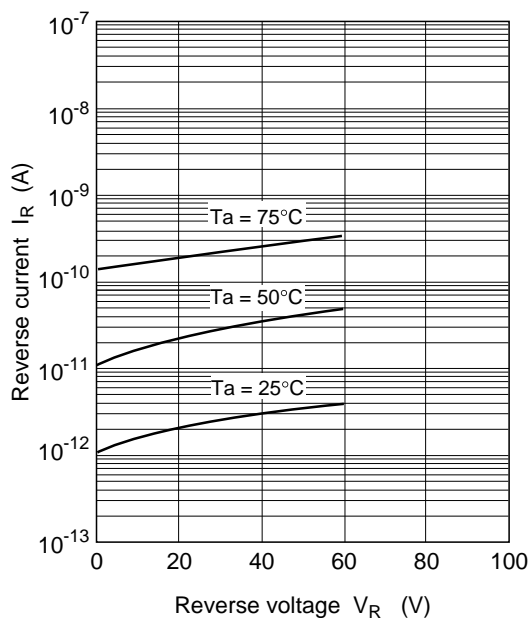


Fig.2 Reverse current vs. Reverse voltage

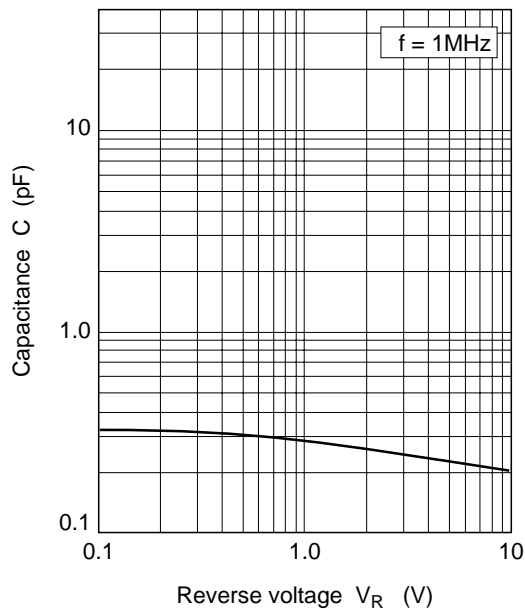


Fig.3 Capacitance vs. Reverse voltage

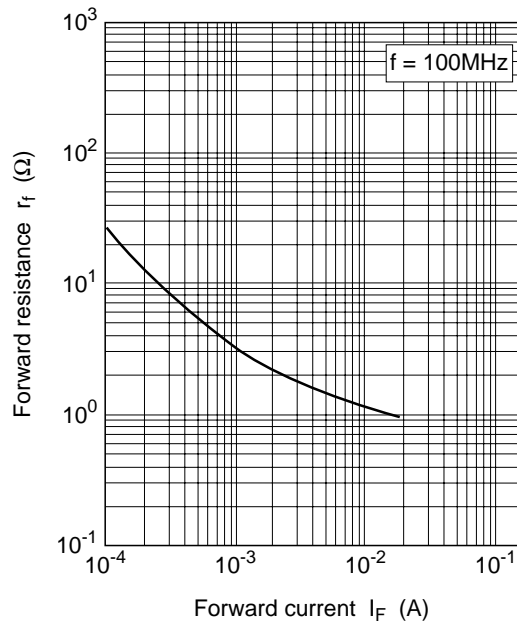


Fig.4 Forward resistance vs. Forward current

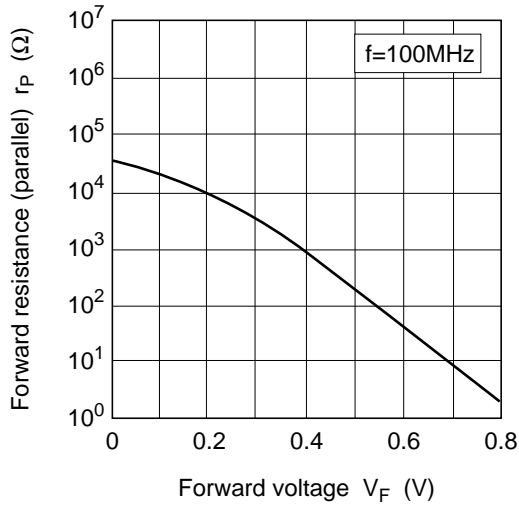
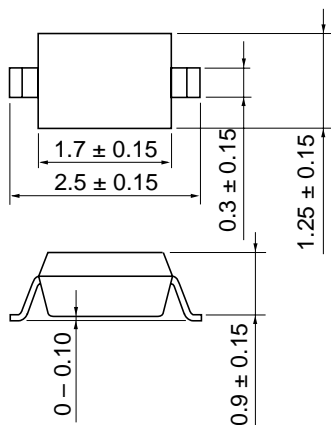


Fig.5 Forward resistance (parallel) vs. Forward voltage

Package Dimensions

As of January, 2002  
Unit: mm



Hitachi Code	URP
JEDEC	Conforms
JEITA	—
Mass (reference value)	0.004 g

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