

# HVU359

## Variable Capacitance Diode for VCO

REJ03G0507-0500  
(Previous: ADE-208-023D)  
Rev.5.00  
Jan 28, 2005

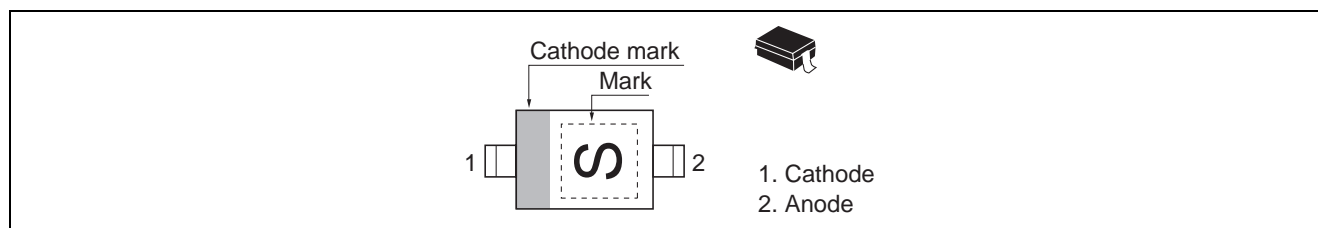
### Features

- High capacitance ratio and good C-V linearity.
- To be usable at low voltage.
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Renesas Code	Previous Code
HVU359	S	PTSP0002ZA-A	URP

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	15	V
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	$I_{R1}$	—	—	10	nA	$V_R = 10\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 10\text{ V}$ , $T_a = 60^\circ\text{C}$
Capacitance	$C_1$	24.8	—	29.8	pF	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$
	$C_4$	6.0	—	8.3		$V_R = 4\text{ V}$ , $f = 1\text{ MHz}$
Capacitance ratio	n	3.0	—	—	—	$C_1/C_4$
Series resistance	$r_s$	—	—	1.5	$\Omega$	$V_R = 4\text{ V}$ , $f = 100\text{ MHz}$
ESD-Capability *1	—	200	—	—	V	$C = 200\text{ pF}$ , $R = 0\ \Omega$ , Both forward and reverse direction 1 pulse.

Note: 1. Failure criterion ;  $I_R \geq 20\text{ nA}$  at  $V_R = 10\text{ V}$

Main Characteristic

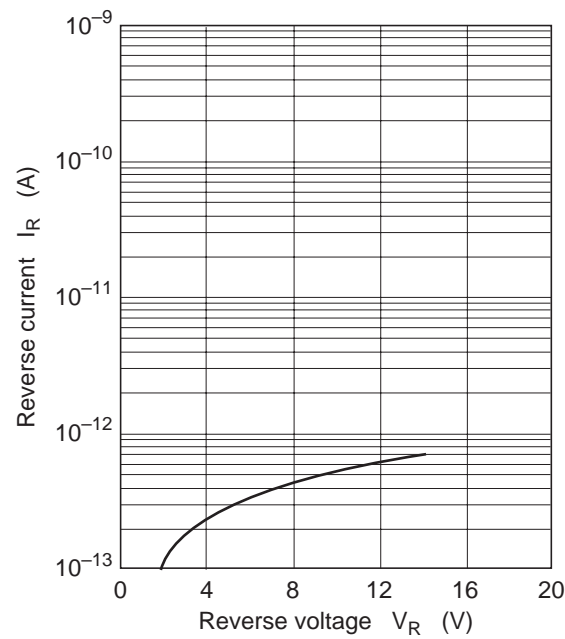


Fig.1 Reverse Current vs. Reverse Voltage

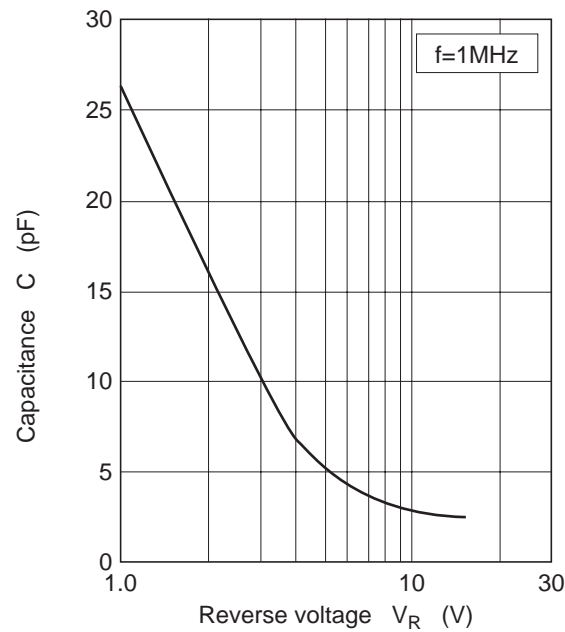
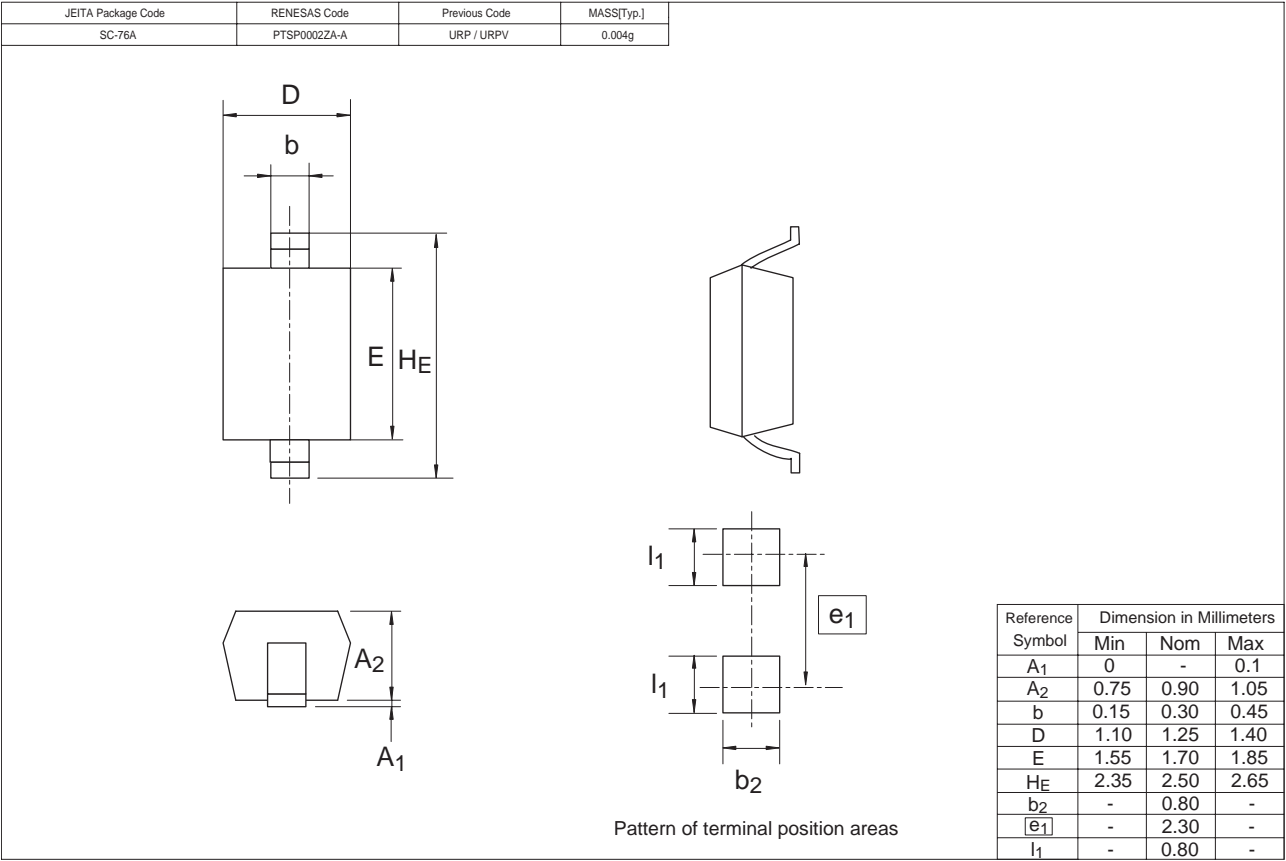


Fig.2 Capacitance vs. Reverse Voltage

Package Dimensions



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