HVD359

Variable Capacitance Diode for VCO

REJ03G0500-0300
Rev.3.00
Jan 24, 2006

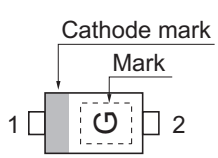
Features

- High capacitance ratio and good C-V linearity.
- To be usable at low voltage.
- Super small Flat Lead Package (SFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVD359	G	SFP	PUSF0002ZB-A

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–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 V
	I_{R2}	—	—	100		V_R = 10 V, Ta = 60°C
Capacitance	C_1	24.8	—	29.8	pF	V_R = 1 V, f = 1 MHz
	C_4	6.00	—	8.30		V_R = 4 V, f = 1 MHz
Capacitance ratio	n	3.00	—	—	—	C_1/C_4
Series resistance	r_S	—	—	1.50	Ω	V_R = 4 V, f =100 MHz
ESD-Capability *[1]	—	200	—	—	V	C = 200 pF, R = 0 Ω, Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion ; $I_R \geq 20$ nA at V_R =10 V

2. For SFP package, the material of lead is exposed for cutting plane. There for, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

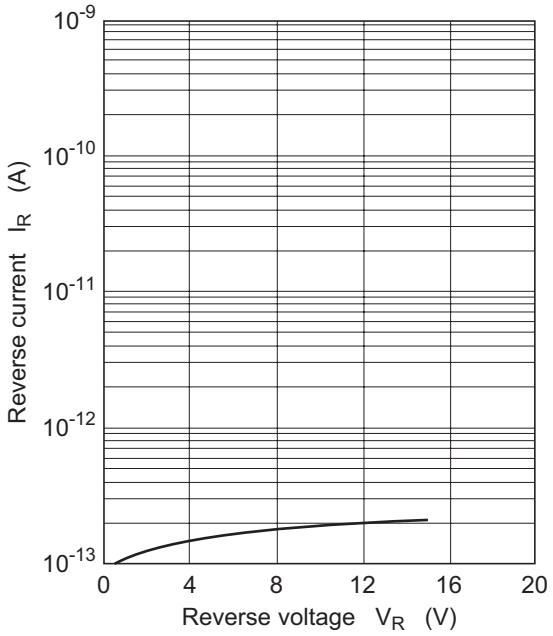


Fig.1 Reverse Current vs. Reverse Voltage

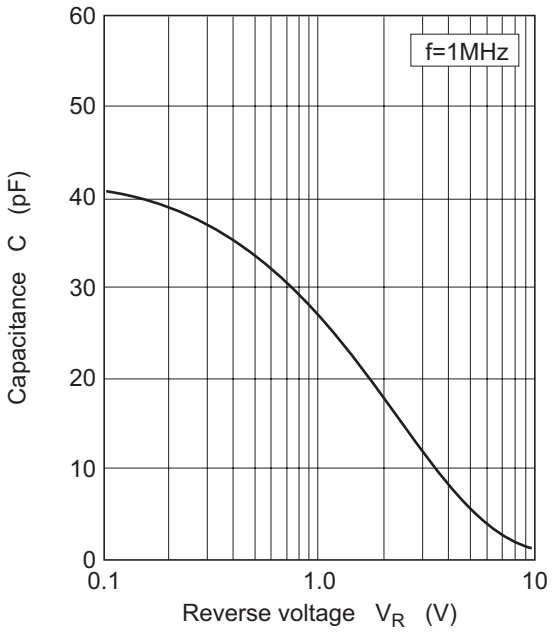
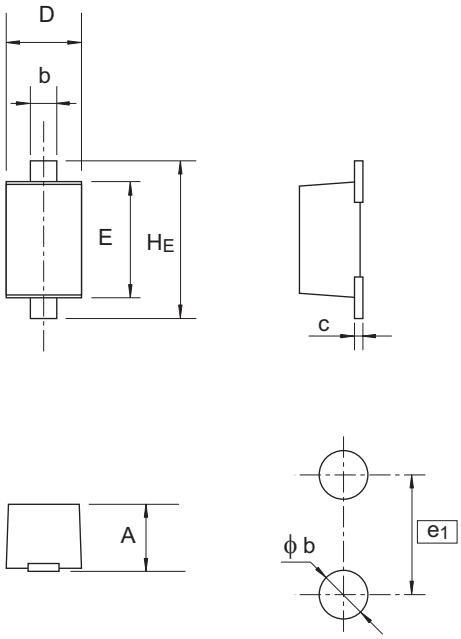


Fig.2 Capacitance vs. Reverse Voltage

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SFP	—	PUSF0002ZB-A	SFP / SFPV	0.0010g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	—	0.55
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.55	0.60	0.65
E	0.90	1.00	1.10
H_E	1.30	1.40	1.50
ϕ b	—	0.50	—
e_1	—	1.40	—

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