

HVC365

Variable Capacitance Diode for VCXO

HITACHI

ADE-208-428A(Z)

Rev 1

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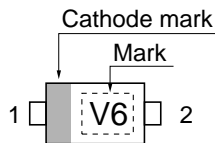
Features

- High capacitance ratio and good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVC365 | V6 | UFP |

Outline



1. Cathode
2. Anode

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 | $V_R = 10V$ |
| | I_{R2} | — | — | 100 | | $V_R = 10V, T_a = 60°C$ |
| Capacitance | C_1 | 27.05 | — | 28.55 | pF | $V_R = 1V, f = 1\text{ MHz}$ |
| | C_4 | 6.05 | — | 7.55 | | $V_R = 4V, f = 1\text{ MHz}$ |
| Capacitance ratio | n | 3.0 | — | — | — | C_1 / C_4 |
| Series resistance | r_s | — | — | 1.5 | Ω | $V_R = 4V, f = 100\text{ MHz}$ |
| ESD-Capability ^{*1} | — | 80 | — | — | V | C=200pF, Both forward and reverse direction 1 pulse. |

Notes 1. Failure criterion ; $IR \geq 20nA$ at $VR = 10V$

Main Characteristic

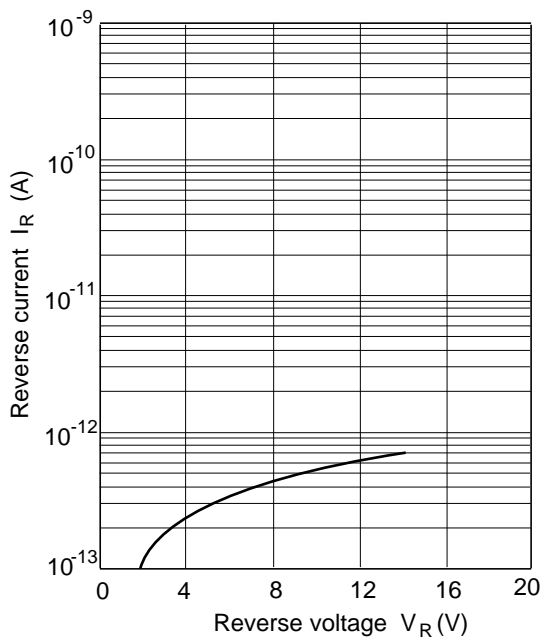


Fig.1 Reverse current Vs. Reverse voltage

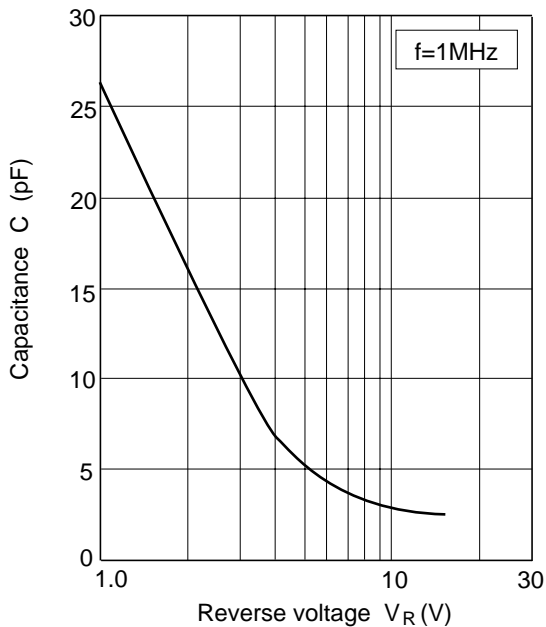
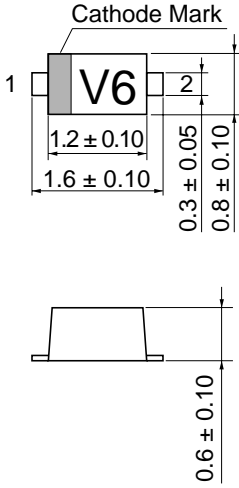


Fig.2 Capacitance Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

| | |
|--------------|------------|
| Hitachi Code | <i>UFP</i> |
| JEDECCode | — |
| EIAJCode | SC-79 |
| Weight(g) | 0.0016 |

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