

HVC357

Variable Capacitance Diode for VCO

HITACHI

 Rev. 0
 Nov. 1995

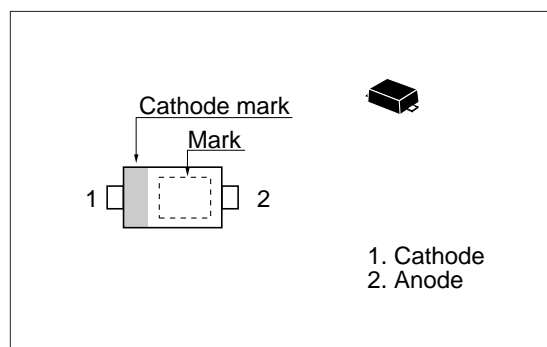
Features

- Low series resistance. ($r_s=0.35\Omega$ max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVC357 | J | UFP |

Outline



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

| Item | Symbol | Value | Unit |
|----------------------|------------------|-------------|------------------|
| Reverse voltage | V_R | 10 | V |
| 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_{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 | 19.5 | — | 23.5 | pF | $V_R = 1\text{ V}, f = 1\text{ MHz}$ |
| | C_2 | 14.3 | — | 17.6 | | $V_R = 2\text{ V}, f = 1\text{ MHz}$ |
| Capacitance ratio | n | 1.3 | — | — | — | C_1 / C_2 |
| Series resistance | r_s | — | — | 0.35 | Ω | $V_R = 1\text{ V}, f = 470\text{ MHz}$ |

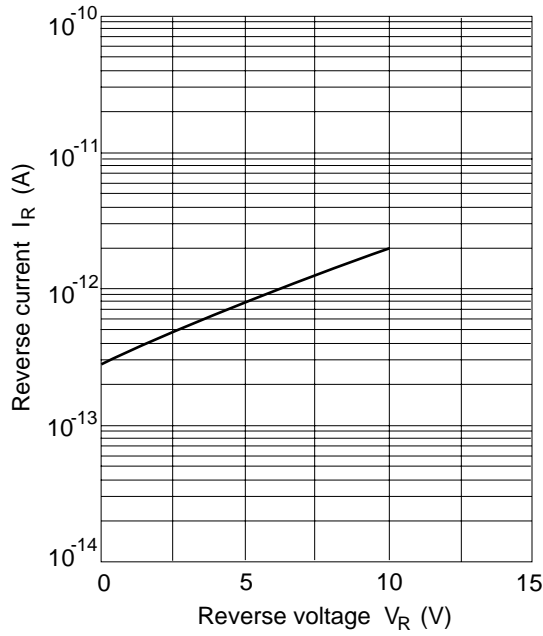


Fig.1 Reverse current Vs. Reverse voltage

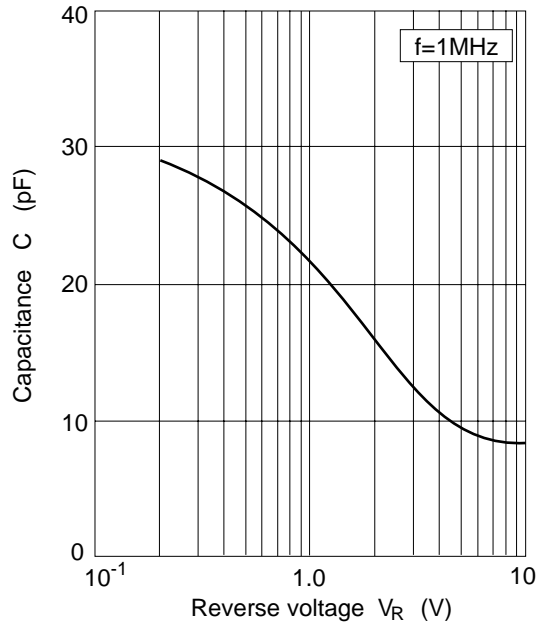


Fig.2 Capacitance Vs. Reverse voltage

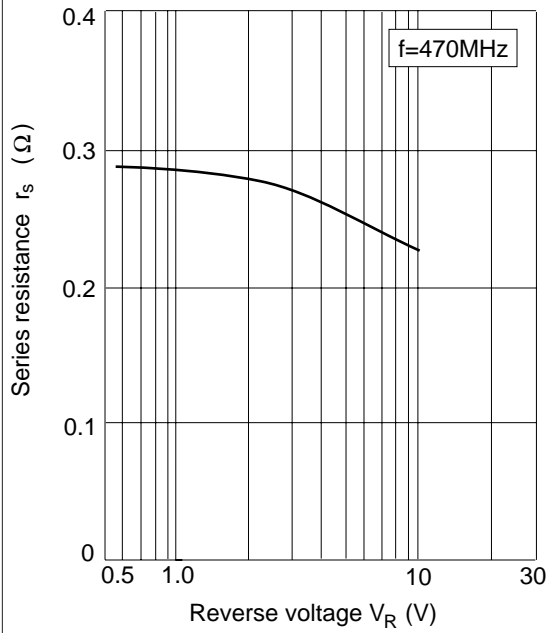


Fig.3 Series resistance Vs. Reverse voltage

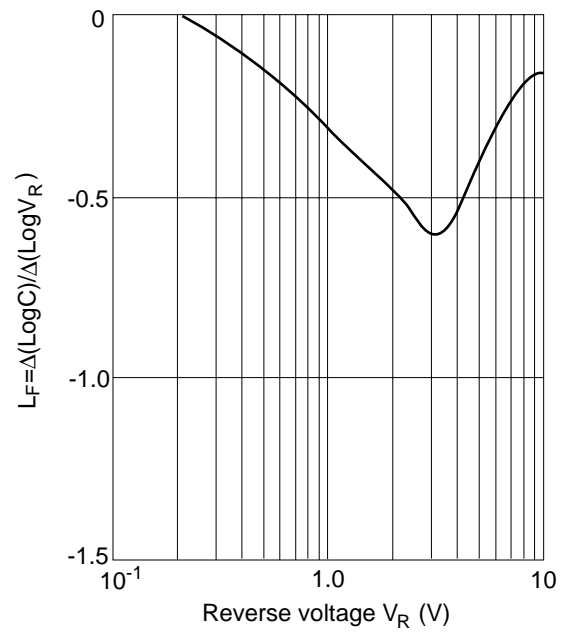
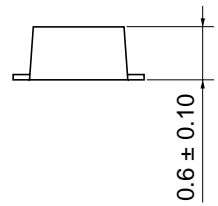
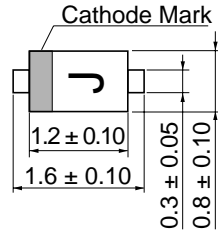


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

| | |
|--------------|--------|
| HITACHI Code | UFP |
| JEDEC Code | — |
| EIAJ Code | SC-79 |
| Weight (g) | 0.0016 |