

# 1SS85 Silicon Epitaxial Planar Diode for VHF tuner Band Switch

## HITACHI

Preliminary  
Rev. 0  
Oct. 1993

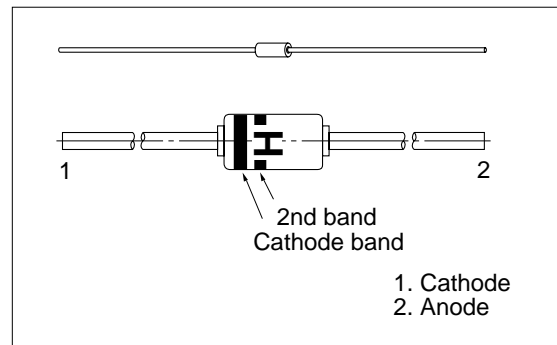
### Features

- Low forward resistance. ( $r_f = 0.9\Omega$  max)
- High reliability with glass seal.

### Ordering Information

| Type No. | Cathode | 2nd Band | Mark | Package Code |
|----------|---------|----------|------|--------------|
| 1SS85    | Verdure | Black    | H    | DO-35        |

### Outline



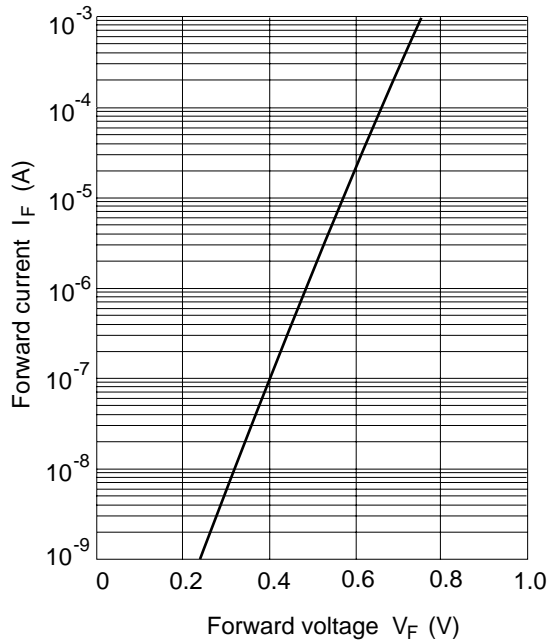
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Item                  | Symbol    | Value       | Unit             |
|-----------------------|-----------|-------------|------------------|
| Reverse voltage       | $V_R$     | 35          | V                |
| Forward current       | $I_F$     | 100         | mA               |
| Power dissipation     | $P_d$     | 150         | mW               |
| Operation temperature | $T_{opr}$ | -20 to + 60 | $^\circ\text{C}$ |
| Storage temperature   | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

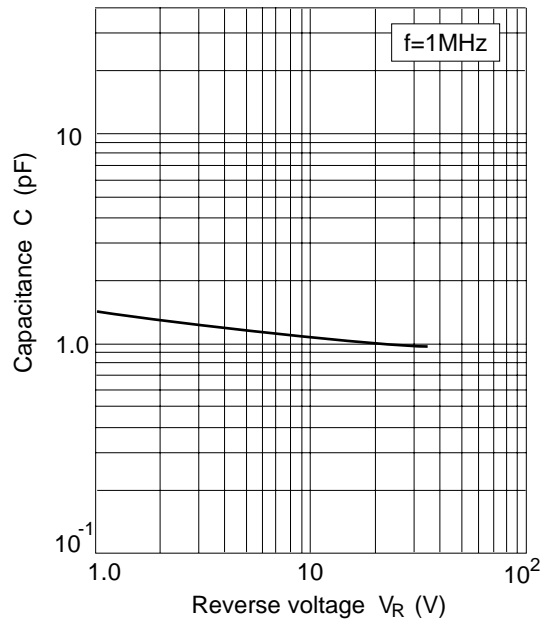
### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Item               | Symbol  | Min | Typ | Max | Unit          | Test Condition               |
|--------------------|---------|-----|-----|-----|---------------|------------------------------|
| Forward voltage    | $V_F$   | —   | —   | 1.0 | V             | $I_F = 10$ mA                |
| Reverse voltage    | $V_R$   | 35  | —   | —   | V             | $I_R = 10$ $\mu\text{A}$     |
| Reverse current    | $I_R$   | —   | —   | 0.1 | $\mu\text{A}$ | $V_R = 25$ V                 |
| Capacitance        | C       | —   | —   | 1.2 | pF            | $V_R = 6$ V , $f = 1$ MHz    |
| Forward resistance | $r_f$   | —   | —   | 0.9 | $\Omega$      | $I_F = 2$ mA , $f = 100$ MHz |
| Lead Inductance    | $L_s^*$ | —   | —   | 3.0 | nH            | $f = 250$ MHz                |

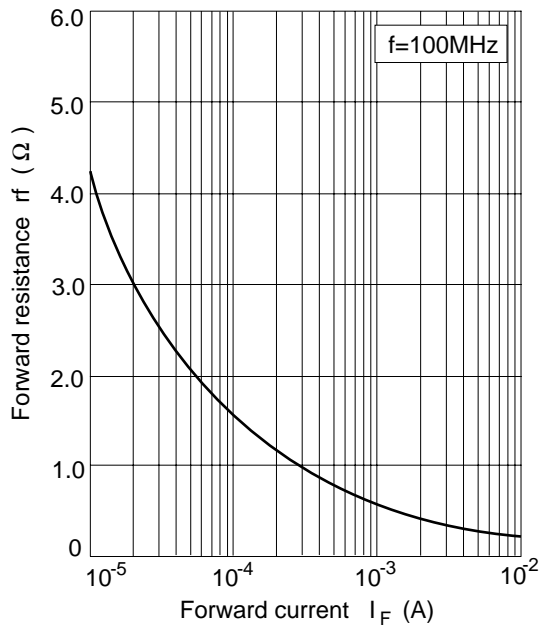
\* The each lead length from glass body is 4mm.



**Fig.1 Forward current Vs. Forward voltage**



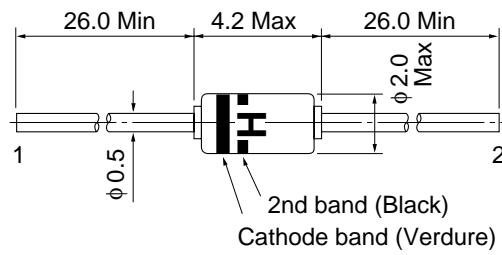
**Fig.2 Capacitance Vs. Reverse voltage**



**Fig.3 Forward resistance Vs. Forward current**

### Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

|              |       |
|--------------|-------|
| HITACHI Code | DO-35 |
| JEDEC Code   | DO-35 |
| EIAJ Code    | SC-48 |
| Weight (g)   | 0.13  |