

# 1SS199

Silicon Schottky Barrier Diode for Various Detector,  
High Speed Switching

# HITACHI

ADE-208-299A (Z)  
Rev. 1

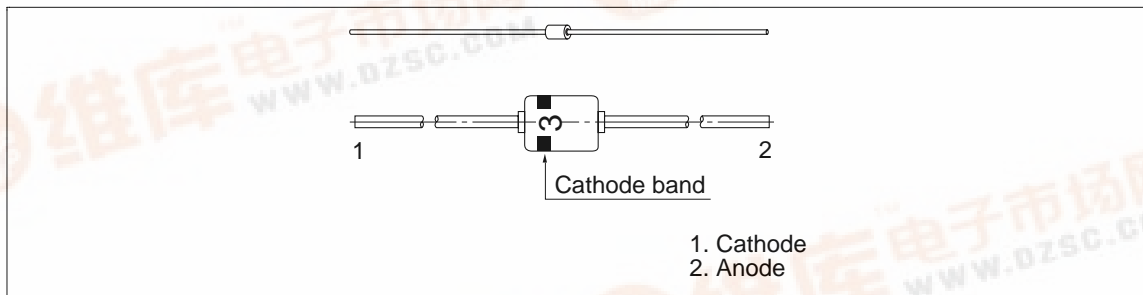
## Features

- Detection efficiency is very good.
- Small temperature coefficient.
- Small glass package (MHD) enables easy mounting and high reliability.

## Ordering Information

| Type No. | Cathode band | Mark | Package Code |
|----------|--------------|------|--------------|
| 1SS199   | Green        | 3    | MHD          |

## Outline



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## 1SS199

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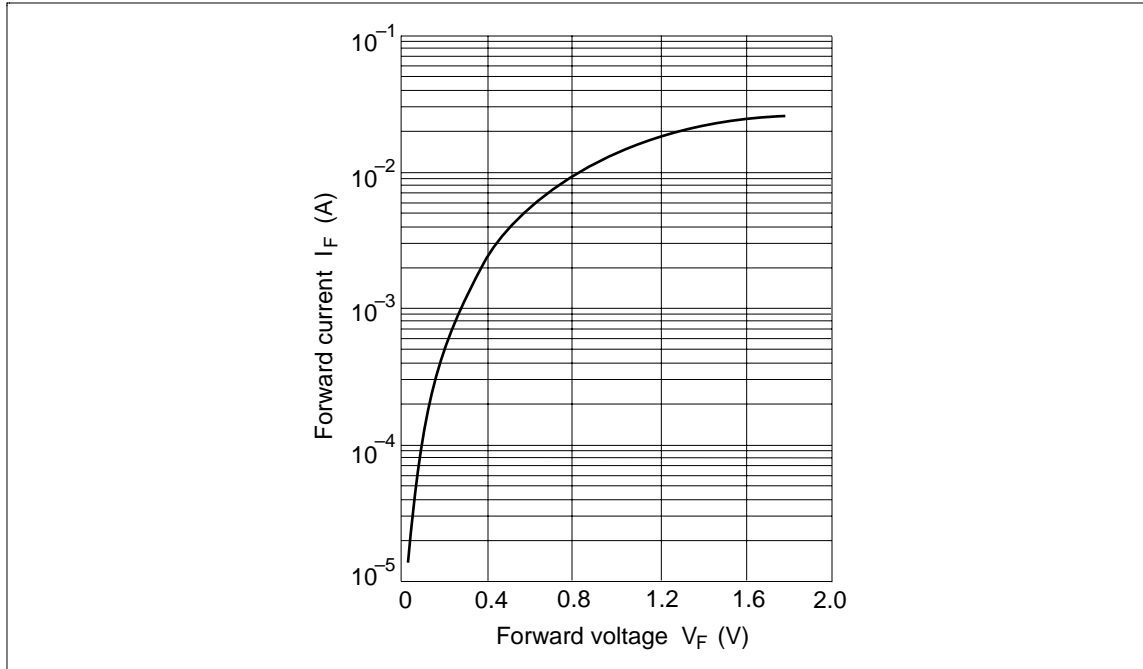
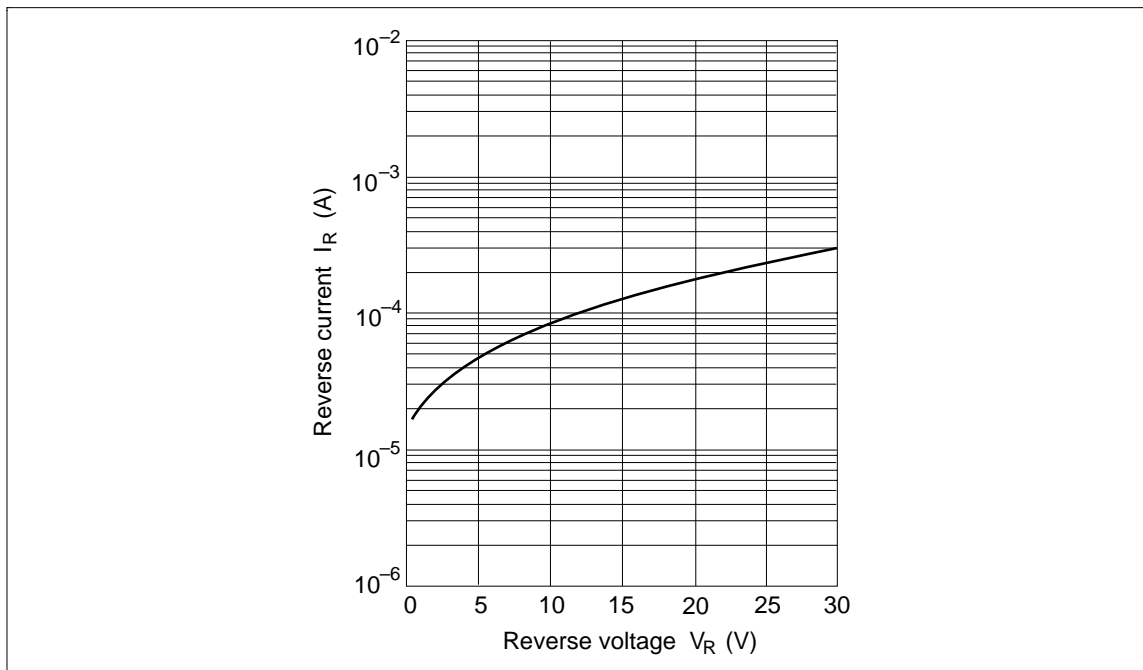
### Absolute Maximum Ratings (Ta = 25°C)

| Item                      | Symbol    | Value       | Unit |
|---------------------------|-----------|-------------|------|
| Reverse voltage           | $V_R$     | 30          | V    |
| Average rectified current | $I_o$     | 15          | mA   |
| 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   |
|----------------------|--------|-----|-----|-----|---------|--|
| Forward current      | $I_F$  | 3.0 | —   | —   | mA      | $V_F = 1V$   |
| Reverse current      | $I_R$  | —   | —   | 100 | $\mu A$ | $V_R = 10V$  |
| Capacitance          | $C$    | —   | —   | 3.0 | pF      | $V_R = 1V, f = 1MHz$                                       |
| Rectifier efficiency | $\eta$ | 70  | —   | —   | %       | $V_{in} = 2V_{rms}, f = 40MHz, R_L = 5k\Omega, C_L = 20pF$ |
| ESD-Capability       | —      | 70  | —   | —   | V       | *C = 200pF, Both forward and reverse direction 1 pulse.    |

Note: Failure criterion;  $I_R \geq 200\mu A$  at  $V_R = 10V$

**Fig.1 Forward current Vs. Forward voltage****Fig.2 Reverse current Vs. Reverse voltage**

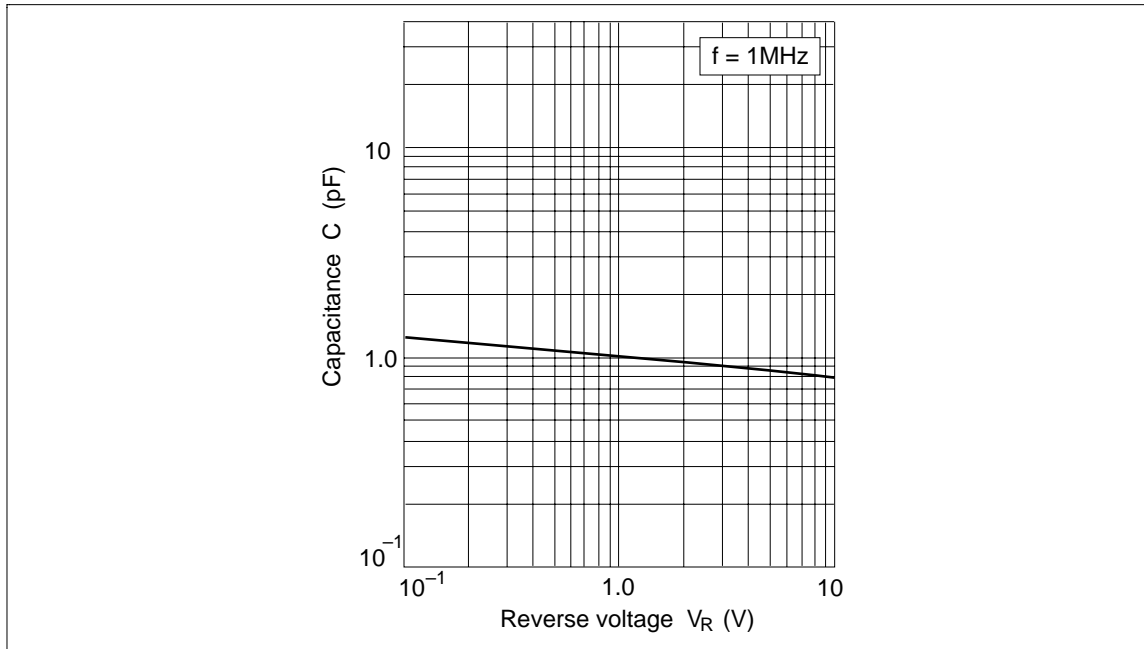


Fig.3 Capacitance Vs. Reverse voltage

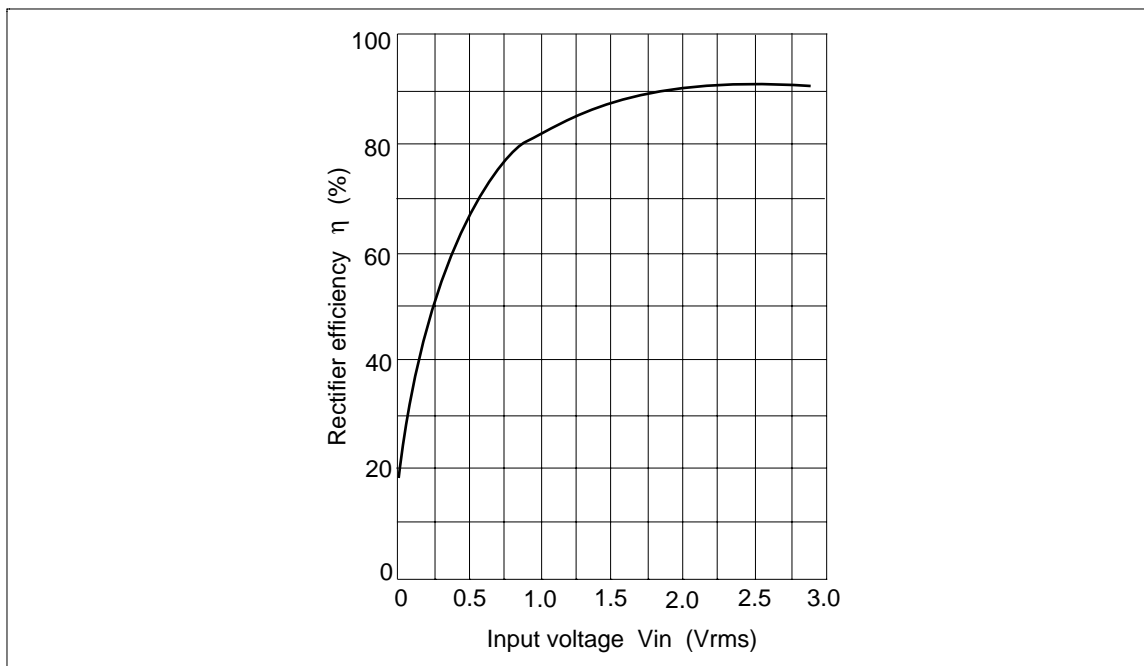
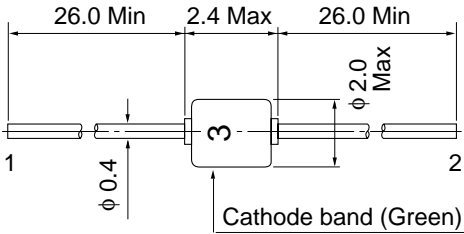


Fig.4 Rectifier efficiency Vs. Input voltage

Package Dimensions

Unit: mm



1 Cathode  
2 Anode

|              |       |
|--------------|-------|
| HITACHI Code | MHD   |
| JEDEC Code   | DO-34 |
| EIAJ Code    | —     |
| Weight (g)   | 0.084 |