

## Advanced Switching Diode

Formosa MS

# ASD355-N

Silicon epitaxial planar type

## Features

- Small surface mounting type
- High reliability
- High speed ( $t_{rr} < 4 \text{ ns}$ )

## Mechanical data

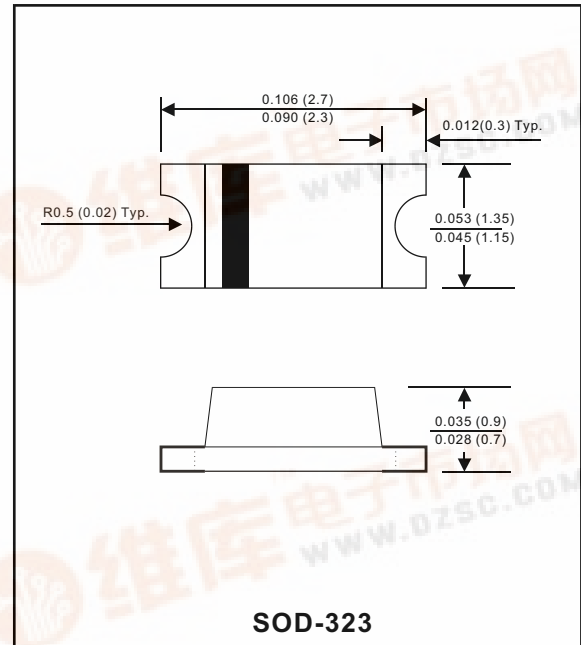
Case : Molded plastic, JEDEC SOD-323

Terminals : Solder plated, solderable per MIL-STD-750,  
Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.000159 ounce, 0.0045 gram



## MAXIMUM RATINGS (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                       | CONDITIONS | Symbol    | MIN. | TYP. | MAX.  | UNIT             |
|---------------------------------|------------|-----------|------|------|-------|------------------|
| Repetitive peak reverse voltage |            | $V_{RRM}$ |      |      | 100   | V                |
| Peak forward surge current      | $t_p < 1s$ | $I_{FSM}$ |      |      | 500.0 | mA               |
| Average forward current         | $V_R = 0$  | $I_{FAV}$ |      |      | 100   | mA               |
| Power dissipation               |            | $P_V$     |      |      | 350   | mW               |
| Junction temperature            |            | $T_j$     |      |      | 175   | $^\circ\text{C}$ |
| Storage temperature             |            | $T_{STG}$ | -55  |      | +175  | $^\circ\text{C}$ |

## ELECTRICAL CHARACTERISTICS (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER             | CONDITIONS                                                                     | Symbol     | MIN. | TYP. | MAX. | UNIT          |
|-----------------------|--------------------------------------------------------------------------------|------------|------|------|------|---------------|
| Forward voltage       | $I_F = 10\text{mA}$                                                            | $V_F$      |      |      | 1.2  | V             |
| Reverse current       | $V_R = 25\text{V}$                                                             | $I_R$      |      |      | 100  | nA            |
|                       | $V_R = 25\text{V}, T_j = 150^\circ\text{C}$                                    | $I_R$      |      |      | 50   | $\mu\text{A}$ |
|                       | $V_R = 80\text{V}$                                                             | $I_R$      |      |      | 30   | $\mu\text{A}$ |
| Breakdown current     | $I_R = 100\mu\text{A}, T_P/T = 0.01, T_P = 0.3\text{ms}$                       | $V_{(BR)}$ | 100  |      |      | V             |
| Diode capacitance     | $V_R = 0, f = 1\text{MHz}, V_{HF} = 50\text{mV}$                               | $C_D$      |      |      | 4.0  | pF            |
| Thermal resistance    | Junction to ambient                                                            | $R_{thJA}$ |      |      |      | K/mW          |
| Reverse recovery time | $I_F = 10\text{mA}, V_R = 6\text{V}, I_{RR} = 0.1 \times I_R, R_L = 100\Omega$ | $t_{rr}$   |      |      | 4    | ns            |

RATING AND CHARACTERISTIC CURVES (ASD355-N)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

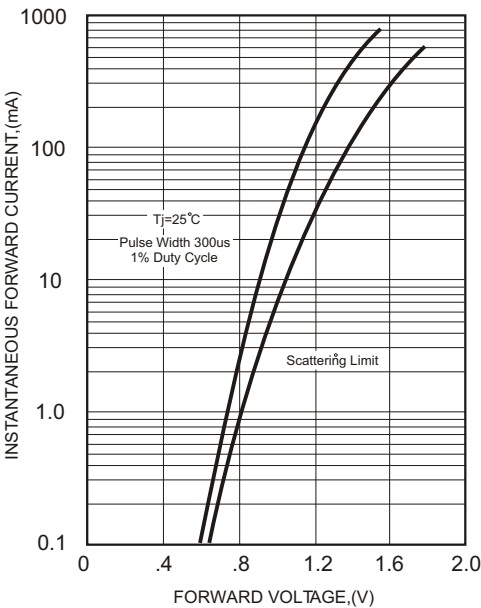


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

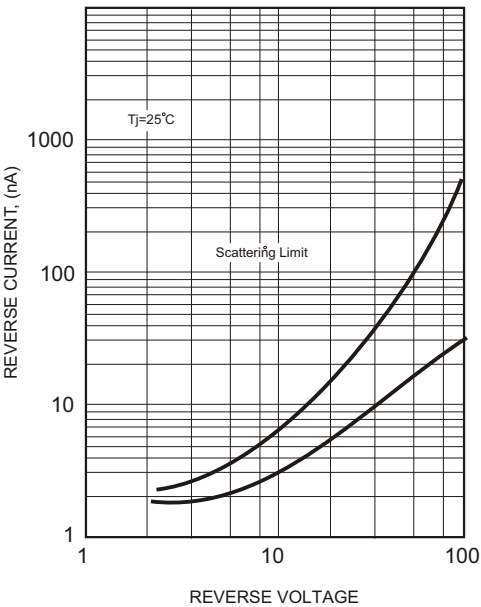


FIG.2 - TYPICAL DIODE CAPACITANCE

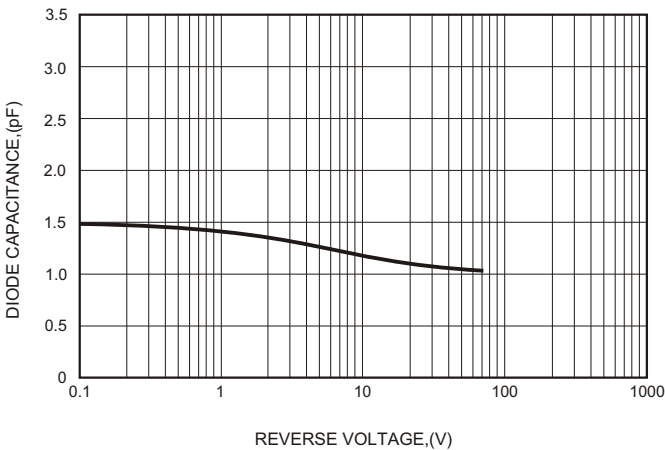


FIG.4 - REVERSE CURRENT VS JUNCTION TEMPERATURE

