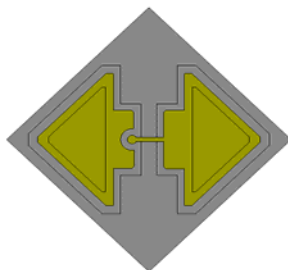


## GaAs Schottky diode –Squared shaped single TSC-SSS-05425



### Features


- ◆ Junction capacitance as low as 1fF allowing cutoff frequency >2THz
- ◆ Very low parasitic capacitance < 9fF
- ◆ Ultra low series resistance
- ◆ Airbridged anode contact for low parasitic operation
- ◆ Fully passivated by SiN
- ◆ Flip chip and beamlead geometry
- ◆ Anode metalization optimized for reliable optimization
- ◆ MMIC backend process available for integrated passives and vias
- ◆ Unique gold stand-off platforms for ruggedness in flip-chip applications

| Description               | Symbol | Part Number   | Condition | Min    | Max      |
|---------------------------|--------|---------------|-----------|--------|----------|
| Ideality                  | N      | TSC-SSS-05425 |           | 1.1    | 1.2      |
| Junction Capacitance      | Cj     |               |           | 23 fF  | 23 fF    |
| Capacitance Total         | Ct     |               |           | 62 fF  | 66 fF    |
| Series Resistance         | Rs     |               |           |        | 2.5 ohms |
| Forward Voltage           | Vf     |               | If @ 1mA  | 0.66 V | 0.75 V   |
| Reverse Breakdown Voltage | VBr    |               | IR @ -5uA | -5 V   |          |
| Saturation Current        | Is     |               |           |        | 8e-14 A  |

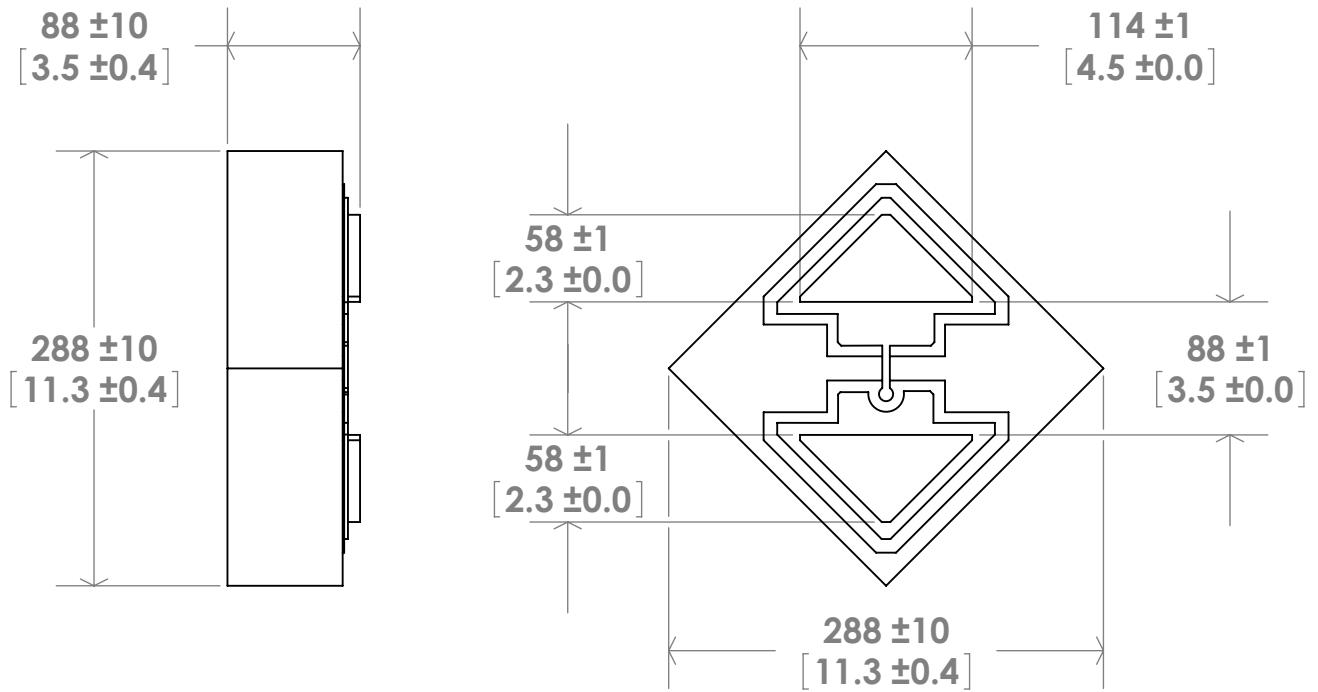
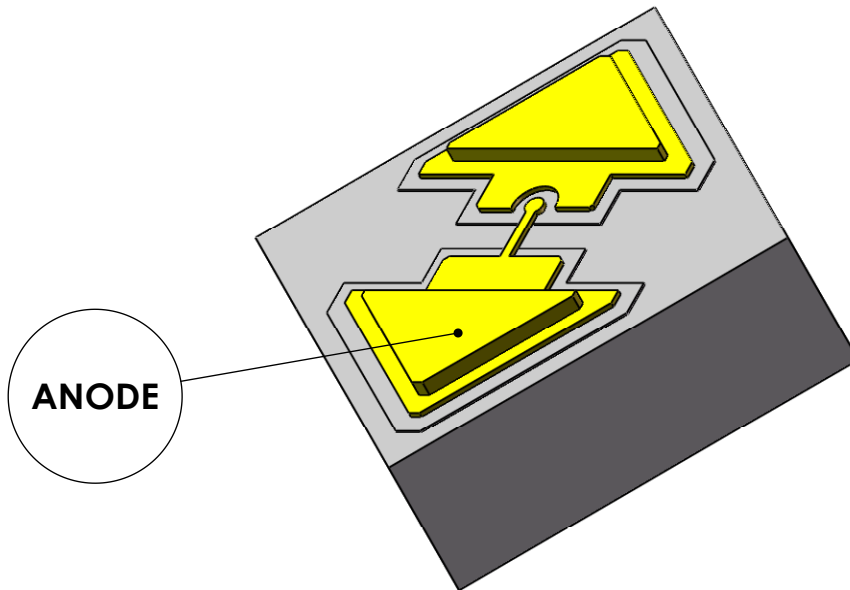
### Product Description

- ◆ Ideality(N) is measured using  $N=1/(V_{th} \cdot \ln(10) \cdot m)$  where  $m=I(0.62V)-I(0.48V)/0.62-0.48$  and  $V_{th}=K \cdot T/q$
- ◆ Is is measured using  $I_s=I(V_0)$
- ◆ VBr is measured at reverse bias current compliance of -5uA
- ◆ Vf is measured at forward current of 1mA
- ◆ Rs is measured using  $R_s = 111.11 \cdot ((V@5mA - V@500uA) - (V@100uA - V@10uA))$
- ◆ Junction capacitance is calculated based on the device area and a fixed capacitance per unit area

### Ordering information

| PART NUMBER   | DESCRIPTION                                | CAUTION  |
|---------------|--|--|
| TSC-SSS-05425 | Square shaped single diode with Cj = 23 fF | <br>DEVICE SUSCEPTIBLE TO<br>DAMAGE BY ELECTROSTATIC<br>DISCHARGE (ESD) |

**Schottky Diode Model:  
SSSD25**



**Dimensions in microns [mils]**