



ESD Protection Diode – SiSTVS3V3

Unidirectional transient voltage suppressor diode in bare die form

Rev 1.0
23/06/25

Features:

- Unidirectional configuration
- Low leakage
- Low capacitance
- 3.3V stand-off voltage
- Single bond-wire requirement

Ordering Information

The following part suffixes apply:

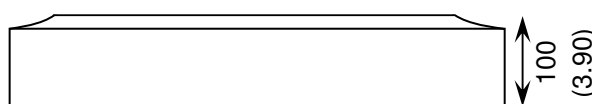
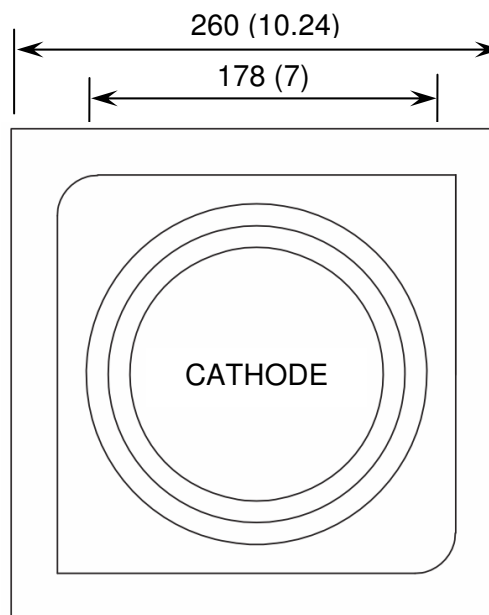
- No suffix - MIL-STD-750 /2073 Visual Inspection
- “H” - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class H LAT
- “K” - MIL-STD-750 /2073 Visual Inspection
+ MIL-PRF-38534 Class K LAT

LAT = Lot Acceptance Test.

For further information on LAT process flows see below.

www.siliconsupplies.com/quality/bare-die-lot-qualification

Die Dimensions in μm (mils)



CHIP BACKSIDE IS ANODE

Supply Formats:

- Default – Die in Waffle Pack (400 per tray capacity)
- Sawn Wafer on Tape – By specific request
- Unsawn Wafer – By specific request
- Die Thickness \leftrightarrow 100 μm (3.9 Mils) – On request
- With additional electrical selection – On request

Mechanical Specification

Die Size (Unsawn)	260 x 260 10.24 x 10.24	μm mils
Anode Pad Size	178 \varnothing 7 \varnothing	μm mils
Die Thickness	100 (± 15) 3.90 (± 0.59)	μm mils
Top Metal Composition	Al	
Back Metal Composition	Au	





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Absolute Maximum Ratings¹ $T_J = 25^\circ\text{C}$ unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	80	W
Operating Junction temperature	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to 150	$^\circ\text{C}$

1. Operation above the absolute maximum rating may cause device failure. Operation at the absolute maximum ratings, for extended periods, may reduce device reliability.

ESD Rating Compliant to IEC 61000-4-2, IEC 61000-4-4

PARAMETER	SYMBOL	VALUE	UNIT
Electrical Fast Transient (IEC 61000-4-4) (5 x 50ns)	EFT	40	A
Air	V_{ESD}	30	kV
Contact		30	kV

Electrical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise stated, $V_{F(MAX)} = 0.9\text{V}$ @ $I_F = 10\text{mA}$

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V_{RWM}		-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5	-	-	V
Reverse Leakage	I_R	$V_{RWM} = 3.3\text{V}$	-	-	2.5	μA
Clamping Voltage ²	V_C	$I_{PP} = 5.3\text{A}$	-	3	-	V
		$I_{PP} = 11.3\text{A}$	-	6	-	
Dynamic Resistance ²	R_{DYN}		-	0.5	-	Ω
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	45	-	pF

2. Clamping Transmission Line Pulse (TLP) conditions: $Z_0 = 50\Omega$, $t_p = 100\text{ns}$

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