

### Bidirectional transient voltage suppressor diode in bare die form

### Rev 1.2 23/06/25

## Features:

- Bidirectional configuration
- Very low leakage
- Low capacitance
- 5V 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

# 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 <> 90µm(3.5 Mils) On request
- With additional electrical selection On request

# Die Dimensions in µm (mils)



CHIP BACKSIDE IS ANODE/CATHODE

Die Size (Unsawn)	175 x 175 6.98 x 6.98	µm mils	
Anode Pad Size	117 x 117 4.61 x 4.61	µm mils	
Die Thickness	90 (±15) 3.54 (±0.59)	µm mils	
Top Metal Composition	AlCu 3µm		
Back Metal Composition	Ti/Ni/Ag 2µm		





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## Absolute Maximum Ratings<sup>1</sup> $T_J = 25^{\circ}C$ unless otherwise stated

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (t <sub>p</sub> = 8/20 µs)	Ррк	55	W
Peak Pulse Current (t <sub>p</sub> = 8/20 µs)	Ірр	5.5	A
Operating Junction temperature	TJ	-55 to 125	C°
Storage Temperature Range	T <sub>STG</sub>	-65 to 150	°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

PARAMETER	SYMBOL	VALUE	UNIT
Air	V <sub>ESD</sub>	±30	kV
Contact		±30	kV

### Electrical Characteristics T<sub>J</sub> = 25°C unless otherwise stated

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V <sub>RWM</sub>		-	-	±5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> = 1mA	5.8	-	9.5	V
Reverse Leakage	I <sub>R</sub>	V <sub>RWM</sub> = 5V	-	-	200	nA
Clamping Voltage	V <sub>C</sub> <sup>2</sup>	I <sub>PP</sub> = 16A, t <sub>p</sub> = 100ns	-	9.0	-	
	V <sub>C</sub> <sup>3</sup>	V <sub>ESD</sub> = 8kV	-	9.0	-	
	V. <sup>4</sup>	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs	-	5.8	7.5	
	V C	I <sub>PP</sub> = 5.5A, t <sub>p</sub> = 8/20µs	-	8.0	10.0	
Junction Capacitance	CJ	V <sub>R</sub> = 0V, f = 1MHz	-	0.3	0.4	pF

2. Clamping Voltage was measured by Transmission Line Pulse Test (TLP), TLP conditions:  $Z_0$ = 50  $\Omega$ ,  $t_r$  = 0.6ns,  $t_p$  = 100ns,  $I_{TLP}$  and  $V_{TLP}$  averaging window from 70ns to 90ns.  $R_{DYN}$  is calculated from 4A to 16A.

3. Contact discharge mode, according to IEC61000-4-2.

4. Clamping Voltage was measured by 8/20 $\mu$ s current waveform, R<sub>s</sub> = 2  $\Omega$ , according to IEC61000-4-5

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