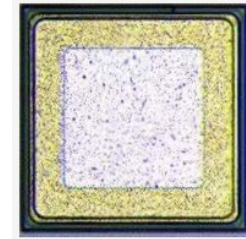


## Features

- 1-Channel Bi-directional ESD diode
- Low Operating Voltage: 36V
- Ultra Low Leakage: nA Level
- Low Clamping Voltage
- Response time is typically < 1 ns
- RoHS compliant
- Ultra Small Die Size, suitable for DFN1006 or SOD-323 package
- Complies with IEC 61000-4-2 standards:
  - Air discharge:  $\pm 30\text{kV}$
  - Contact discharge:  $\pm 30\text{kV}$

## Die Top-View



## Circuit Diagram



From top to backside

## Wafer Information

Item	Description
Wafer size	6 inch
Wafer thickness	$150 \pm 10\mu\text{m}$
Die Size (Include scribe lane)	$450\mu\text{m} \times 450\mu\text{m}$
Bond Pad Opening	$245 \times 245\mu\text{m}$
Scribe lane width	$50\mu\text{m}$
Gross die per wafer	78,000 dies
Top metal for wire bond	$4\mu\text{m}$ ALSiCu
Back side metal	TiNiAgSn(2um)
Passivation thickness	$1.2\mu\text{m}$

## Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P <sub>pk</sub>	350	W
ESD per IEC61000-4-2 (Air)	V <sub>ESD</sub>	±25	kV
ESD per IEC61000-4-2 (Contact)		±20	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

## Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			36	V	
Breakdown Voltage	V <sub>BR1</sub>	38.0	40.6	45.0	V	I <sub>T</sub> =1mA
Breakdown Voltage	V <sub>BR2</sub>	38.0	40.4	45.0	V	I <sub>T</sub> =1mA
Leakage Current	I <sub>Leak</sub>			1	uA	V <sub>RWM</sub> =36V
Clamping Voltage	V <sub>C</sub>		43	50	V	I <sub>PP</sub> =1A, T <sub>p</sub> =8/20μs
Clamping Voltage	V <sub>C</sub>		53	60	V	I <sub>PP</sub> =6A, T <sub>p</sub> =8/20μs
Junction Capacitance	C <sub>J</sub>		22	50	pF	V <sub>R</sub> =0V, f=1MHz

**Note: 1, Electrical parameters are only for die, performance may alter after assembly.**

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