1. Features

- 1-Channel Uni-directional ESD diode
- Low Operating Voltage: 3.3V
- Ultra Low Leakage: nA Level
- Ultra Low Capacitance:
  0.4pF when I/O to GND
- Low Clamping Voltage
- Response time is typically < 1 ns
- RoHS compliant
- Ultra Small Die Size, suitable for DFN1006 package
- Complies with IEC 61000-4-2 standards:
  Air discharge: ±23kV
  Contact discharge: ±23kV

2. Specification

2.1. Absolute Maximum rating

At TA = 25℃ unless otherwise noted

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25℃	P_{pk}	-	50	W
Peak pulse current (tp=8/20us)@25℃	I_{PP}		4	A
ESD (IEC61000-4-2 air discharge) @25℃	V_{ESD}	-	±23	kV
ESD (IEC61000-4-2 contact discharge) @25℃	V_{ESD}	-	±23	kV
Junction temperature	T_J	-	150	℃
Operating temperature	T_{OP}	-55	125	℃
Storage temperature	T_{STG}	-55	150	℃
Lead temperature	T_L	-	260	℃

Table-1 Absolute Maximum rating

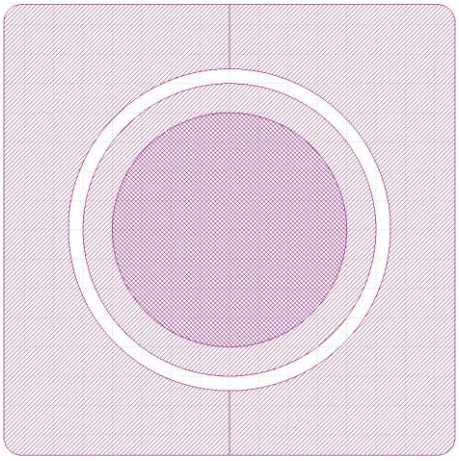
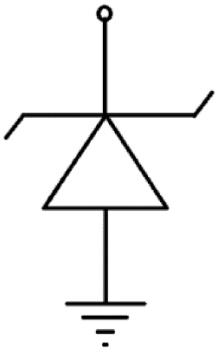
2.2. Electrical Characteristics

At TA = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}			3.3	5.0	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6.0	8.0		V
Reverse Leakage Current	I_R	V_{RWM}=5.0V		5	100	nA
Clamping Voltage	V_C	I_{PP}=1A; tp=8/20us		8.5	10	V
Clamping Voltage	V_C	I_{PP}=4A; tp=8/20us		11	13	V
Junction Capacitance	C_J	V_R=0V, f=1MHz		0.4	0.5	pF

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

3. Pin Configuration and Functions

Die Top-View	Circuit Diagram
	

4. Physical Characteristics

Parameters	Description
Wafer size	8 inch
Wafer thickness	150μm
Die Size (Including scribe line)	200μm x200μm
Bond Pad Opening	80*80μm
Scribe lane width	40μm
Gross die per wafer	727684
Top metal for wire bond	4μm AlSiCu
Back side metal	1.3μm TiNiAg

NOTICE
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