LM-AZ522S-01F

1-Line Bi-directional TVS Diode

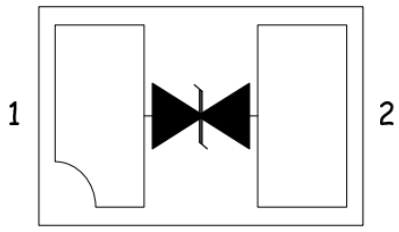
Features

- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±25kV
    - Contact discharge: ±20kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 4A (8/20 μs)
- RoHS Compliant

Dimensions DFN1006



Pin Configuration



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: DFN1006
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:10,000pcs
- Reel Size:7 inch
- Device Marking: 3B

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	56	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000−4−2 (Contact)		± 20	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				3.3	V
VBR	Reverse Breakdown Voltage	IT = 1mA	4.2			V
IR	Reverse Leakage Current	VRWM = 3.3V			0.1	μA
VC	Clamping Voltage	IPP = 1 A (8/20μs)			10	V
VC	Clamping Voltage	IPP = 4 A (8/20μs)			14	V
CJ	Capacitance	VR = 0V, f = 1MHz		0.45	0.6	pF

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

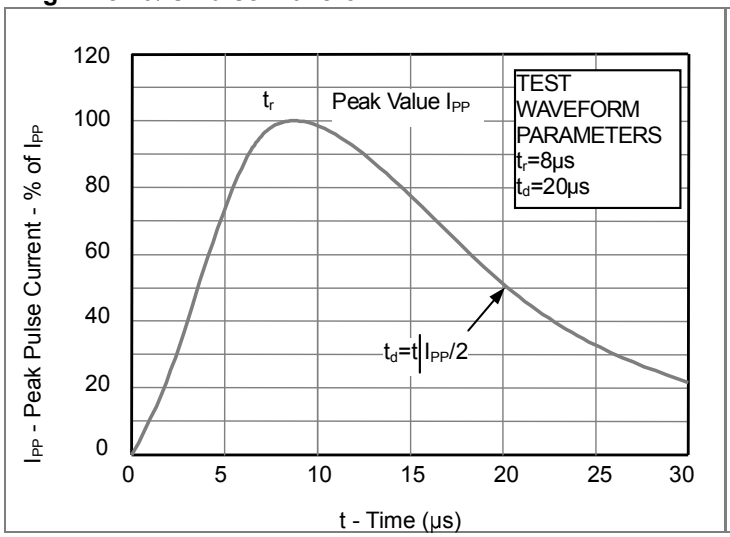


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

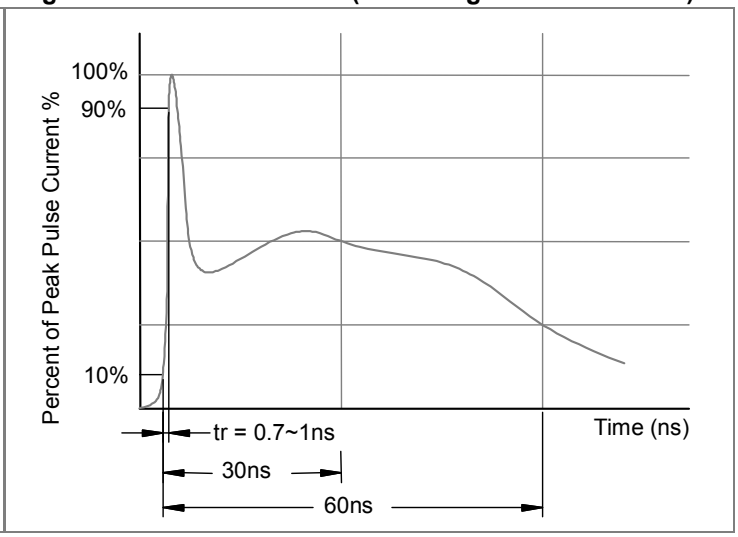
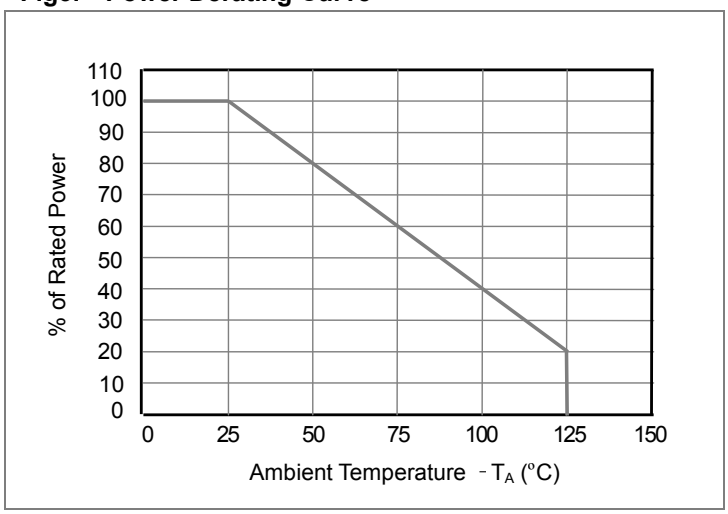
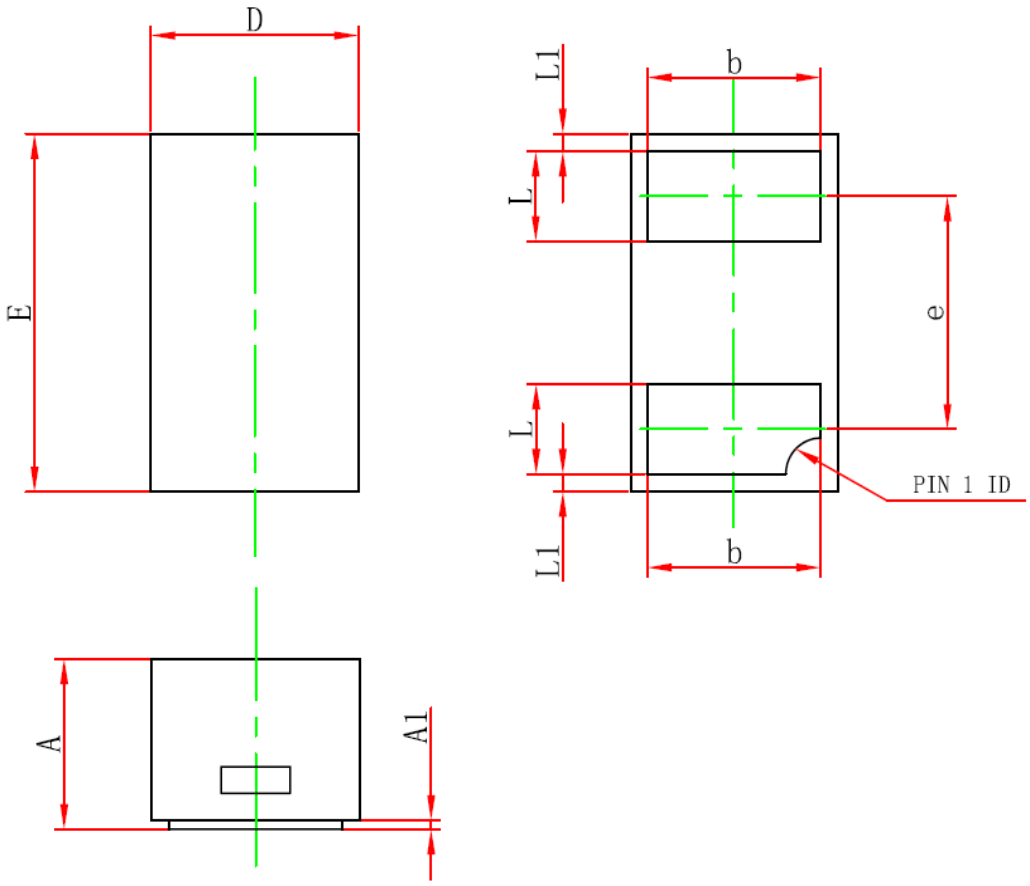


Fig3. Power Derating Curve



DFN1006 Package Outline Drawing



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.400	0.500	0.016	0.020
A1	0.000	0.050	0.000	0.002
D	0.550	0.650	0.022	0.026
E	0.950	1.050	0.037	0.041
b	0.400	0.600	0.016	0.024
e	0.650TYP.		0.026TYP.	
L	0.150	0.350	0.006	0.014
L1	0.050REF.		0.002REF.	

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Shanghai Leiditech Electronic Co.,Ltd
Email: sale1@leiditech.com
Tel : +86- 021 50828806
Fax : +86- 021 50477059