

OM SENI



AZ5423-01F

Low Capacitance Bi-directional TVS Diode

Features

- * Ultra low capacitance: 0.6 pF typical
- * Ultra low leakage: nA level
- * Low operating voltage: $\pm 5V$
- * Low clamping voltage
- * 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 20kV$
 - Contact discharge: $\pm 18kV$
- * – IEC61000-4- 5 (Lightning) 2A (8/20 μs)

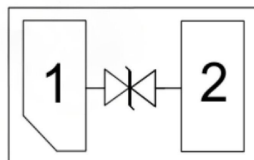
Mechanical Characteristics

- * Package: DFN1006-2(0402)
- * Ultra low leakage: nA level
- * Case Material: "Green" Molding Compound.
- * UL Flammability Classification Rating 94V-0
- * Moisture Sensitivity: Level 3 per J-STD-020
- * Shipping Qty :10000/7Inch Tape & Reel

Applications

- * Mobile Phones and Accessories
- * Battery Protection
- * USB VBus
- * Power Line Protection
- * Hand Held Portable Applications

Dimensions and Pin Configuration



MARKING Code



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Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±18	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5	V
Breakdown Voltage	V _{BR}	I _T = 1mA(Pin1-Pin2)	6.5		9	V
Reverse Leakage Current	I _R	V _{RWM} = 5.0V(Pin2-Pin1)			0.08	μA
Clamping Voltage	V _C	I _{PP} = 1A (8 x 20us pulse) (Pin1-Pin2)			9	V
Clamping Voltage	V _C	I _{PP} = 2A (8 x 20us pulse) (Pin1-Pin2)			15	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz (Pin1-Pin2)		0.6	0.9	pF

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Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

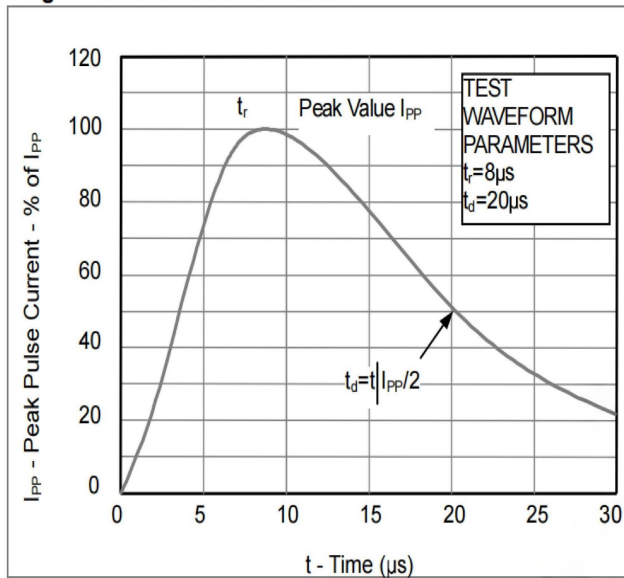


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

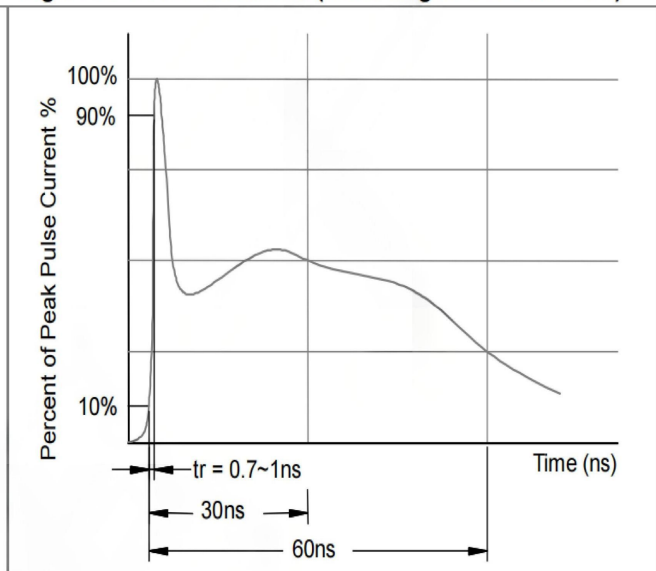
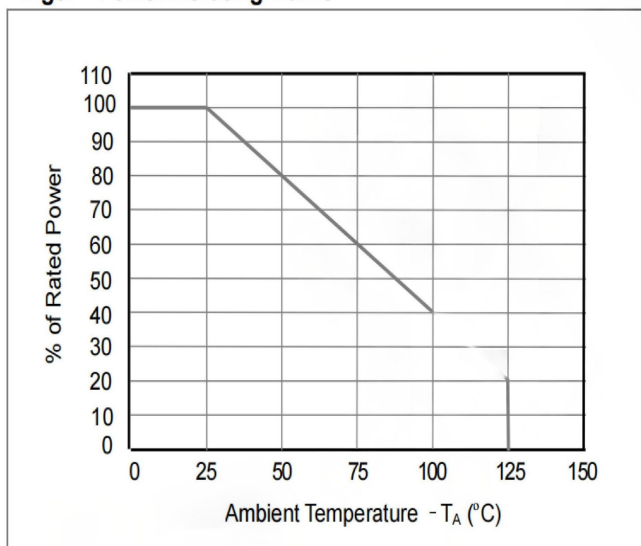


Fig3. Power Derating Curve

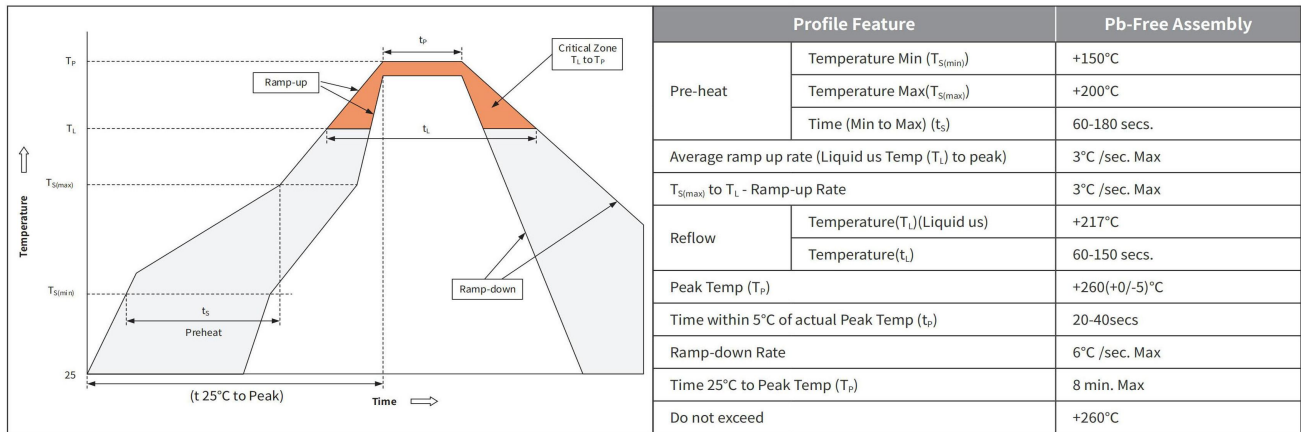


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Ordering Information

PREFERRED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
	DFN1006-2L	1.00×0.60×0.37	7" REEL	10,000

Recommended Soldering Conditions



Package Outline Dimensions (DFN1006-2L)

Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.950	1.050	0.037	0.041
B	0.550	0.650	0.022	0.026
C	0.350	0.450	0.014	0.018
D	0.550	0.650	0.022	0.026
D ₁	0.280	0.380	0.011	0.015
E	0.450	0.550	0.018	0.022
L	0.000	0.100	0.000	0.004

Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
J	0.50	0.60	0.020	0.024
K	0.25	0.35	0.010	0.014
M	0.55	0.65	0.022	0.026