

Descriptions

This is working voltage 7V ESD protection diode in a DFN1006-2L package

Features

- 2-pin lead-less package
- Junction capacitance (Max value: 250pF)
- Peak Pulse Current (8/20 μ s): 40A
- IEC61000-4-2 (ESD) $\pm$ 30kV (air), $\pm$ 30kV (contact)
- Low clamping voltage
- Low leakage current
- RoHS Compliant

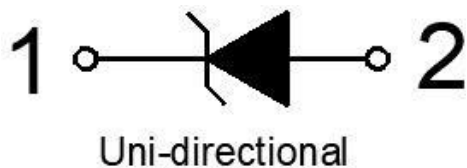
Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Mechanical Characteristics

- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel : 10000pcs

Equivalent Circuit & Pinning



Absolute Maximum Ratings(Ta=25°C)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	PPP	720	W
Peak Pulse Current (8/20μs)	IPP	40	A
Forward Voltage(IF=10mA)	VF	1.2	V
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	KV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				7	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	7.5		9.5	V
Reverse Leakage Current	I _R	V _R = 7V			0.5	uA
Clamping Voltage	V _C	I _{PP} = 1A, T _P =8/20us			10	V
Clamping Voltage	V _C	I _{PP} = 24A, T _P =8/20us			14	V
Clamping Voltage	V _C	I _{PP} = 40A, T _P =8/20us			18	V
Junction Capacitance	C _J	V _R =0V, f=1MHz			250	pF

Typical Characteristics

FIG1: Power rating derating curve

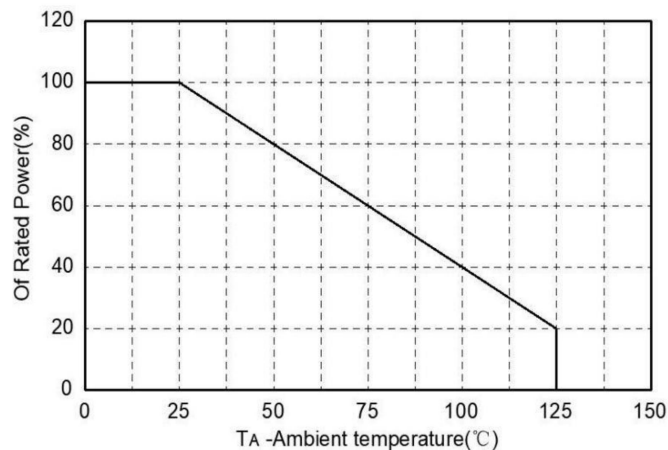


FIG2: pulse Waveform

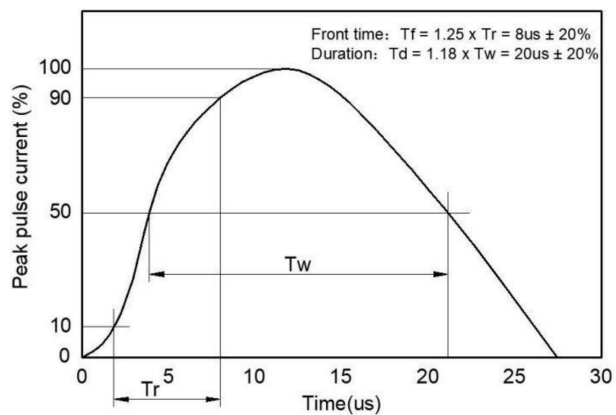


FIG3: Capacitance between terminals characteristics

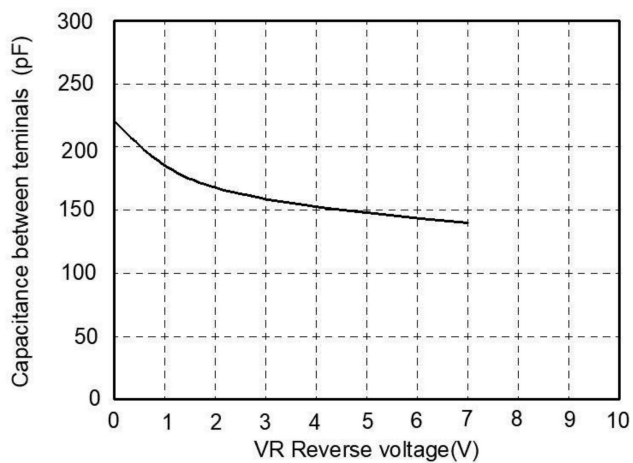
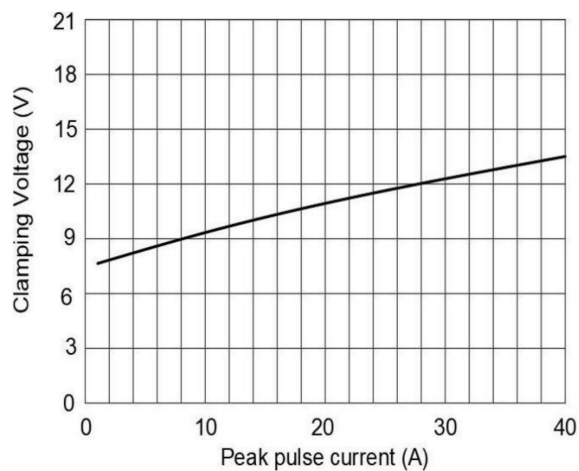
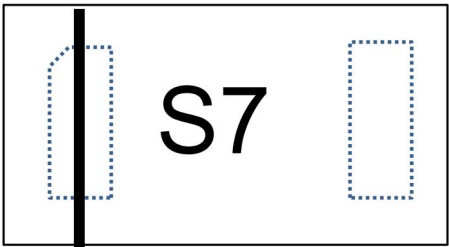


FIG4: Clamping Voltage vs. Peak Pulse Current

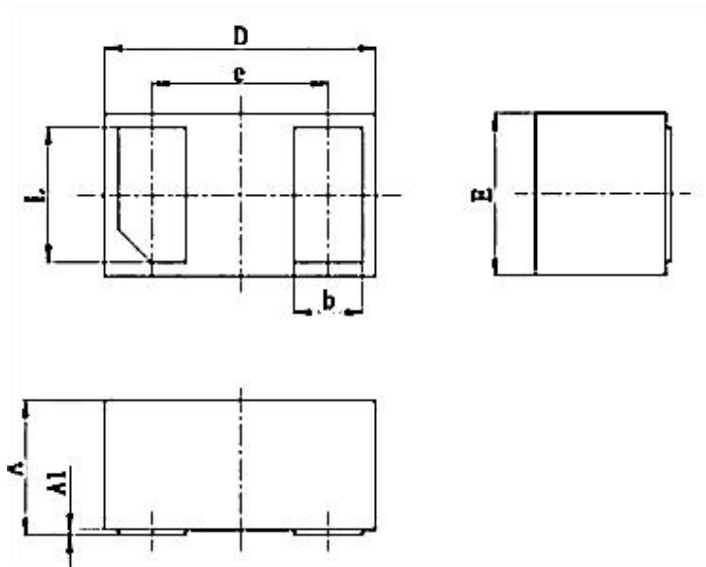


Marking Information



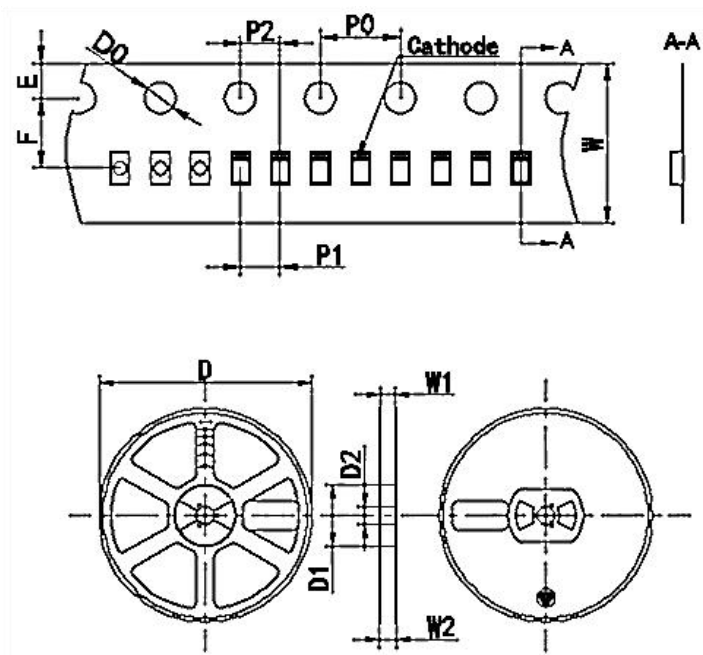
S7=Marking Code

Package mechanical data



Symbol	Dimension in Millimeters	
	min	max
A	0.4	0.5
A1	0	0.05
D	0.9	1.1
E	0.55	0.65
e	(0.65)	
b	0.2	0.3
L	0.34	0.55

Tape & reel specification - DFN1006-2L



Symbol	Dimension in Millimeters
Tape	
D0	1.50+0.10/-0.00
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	2.00±0.10
P2	2.00±0.10
W	8.00+0.3/-0.1
Reel	
D	178.0±2.00
D1	54.40±1.00
D2	13.00±1.00
W1	9.50±1.00
W2	12.30±1.00