

Description

This is working voltage 5V ESD protection diode in a DFN2510-10L package

Applications

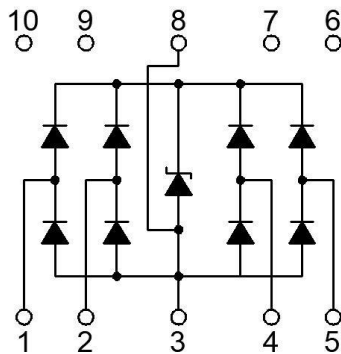
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras

Features

- Up to 4 lines protects
- Ultra low junction capacitance (Max value: 0.5pF)
- Peak Pulse Current (8/20 μ s) MAX: 3A
- IEC61000-4-2 (ESD) \pm 15kV (air), \pm 8kV (contact)
- Low clamping voltage
- Low leakage current
- RoHS Compliant

Mechanical Characteristics

- Lead Finish: Matte Tin
- Case Material: “Gre en” Molding Compound
- UL Flammability Classification Rating94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel :3000pcs

Equivalent Circuit & Pinning


Package: DFN2510-10L

1、2、4、5: I/O

3、8: GND

6、7、9、10: NC

Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{pp}	39	W
Peak Pulse Current (8/20μs)	I _{PP}	3	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±15 ±8	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25 °C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5	V
Breakdown Voltage	V _{BR}	I _T = 1mA	6		9	V
Reverse Leakage Current	I _R	V _{RWM} = 5 V			0.5	μA
Clamping Voltage	V _C	I _{PP} = 1A (8 x 20μs pulse), any I/O pin to ground			10	V
Clamping Voltage	V _C	I _{PP} = 3A (8 x 20μs pulse), any I/O pin to ground			13	V
Junction Capacitance	C _J	V _R = 1.5V, f = 1MHz, between I/O pins		0.2	0.3	pF
Junction Capacitance	C _J	V _R = 1.5V, f = 1MHz, any I/O pin to ground			0.5	pF

Typical Characteristics

FIG1: Power rating derating curve

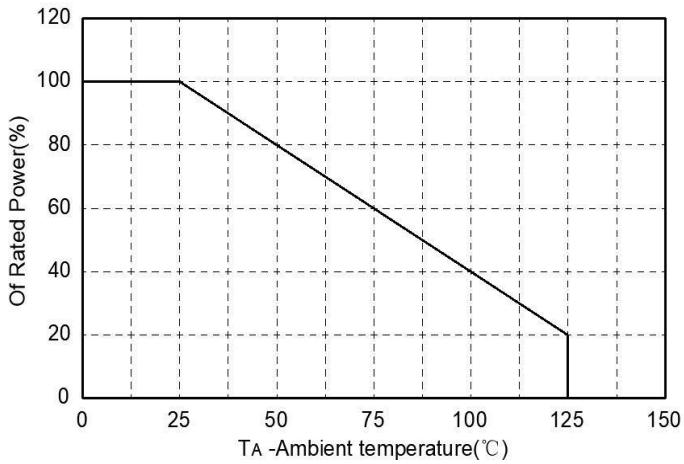


FIG2: pulse Waveform

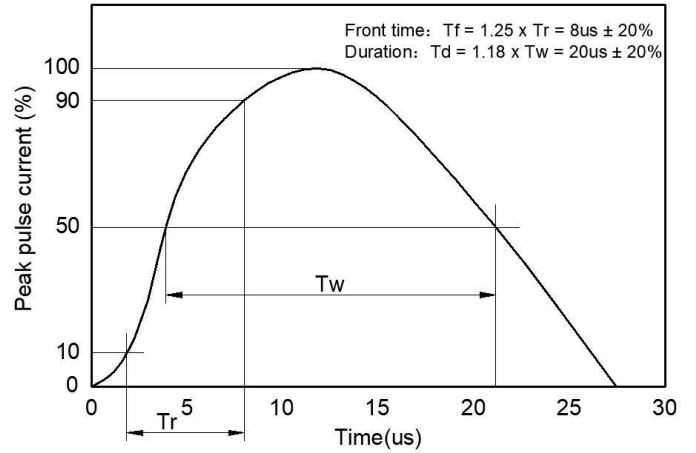


FIG3: Capacitance between terminals characteristics

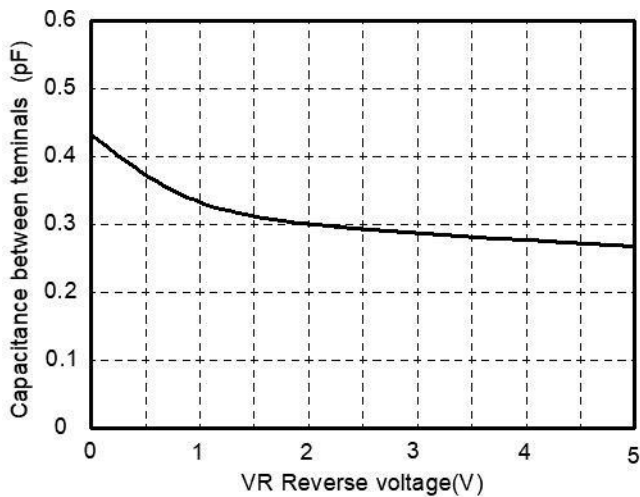
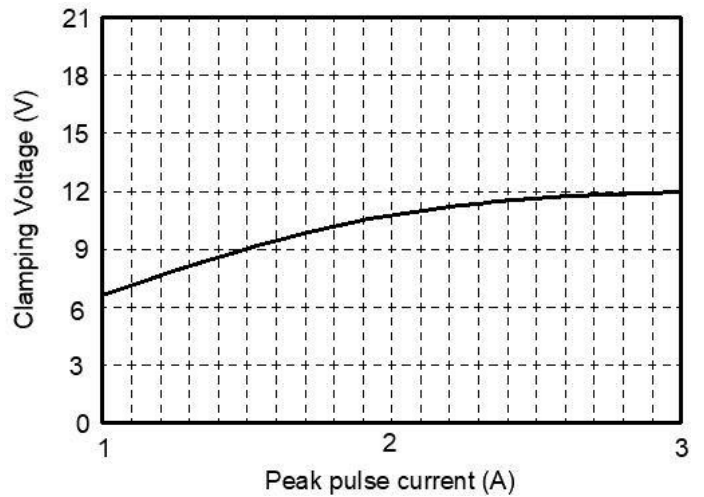
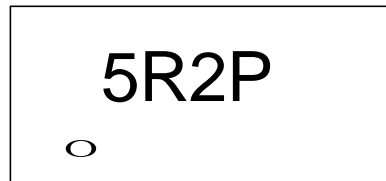
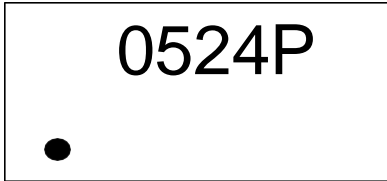


Figure 4: Clamping Voltage vs. Peak Pulse Current



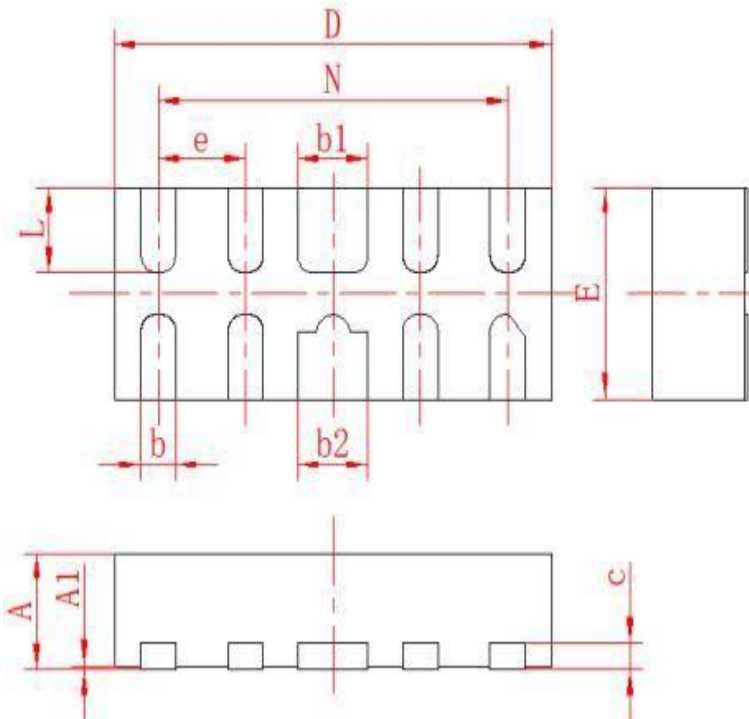
Marking Information



0524P=normal marking
● = Pin1 Logo

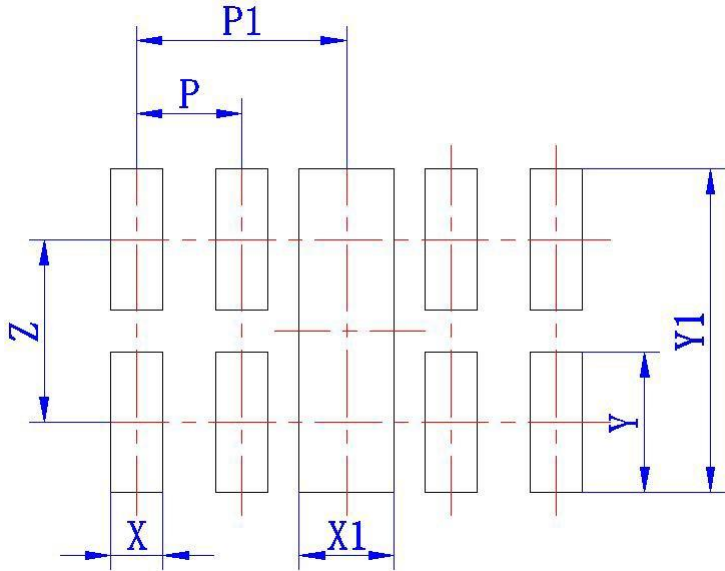
5R2P=special marking
○ = Pin1 Logo

Package mechanical data



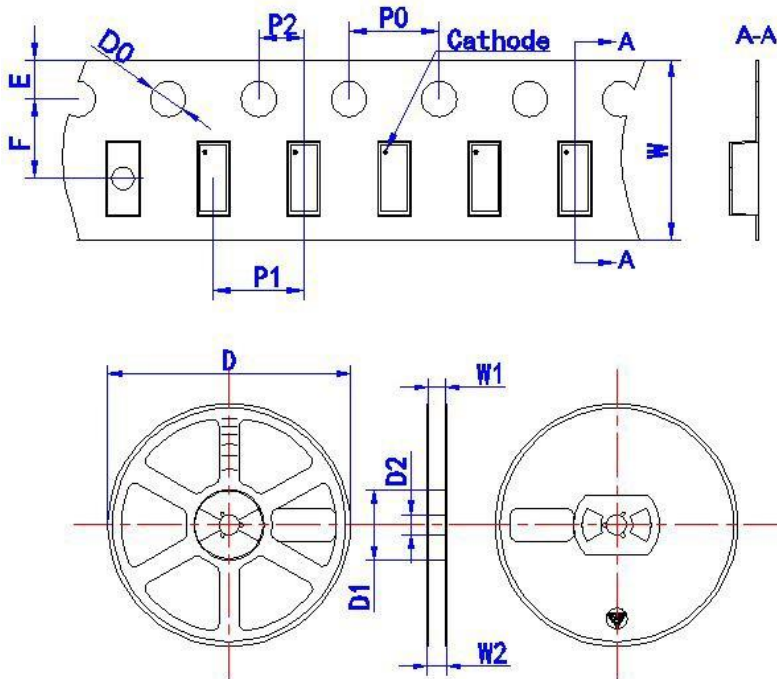
Symbol	Dimension in Millimeters	
	min	max
A	0.5	0.6
A1	0	0.05
D	2.4	2.6
E	0.9	1.1
e	(0.5)	
N	(2.0)	
b	0.15	0.25
b1	0.35	0.45
b2	0.35	0.45
c	(0.127)	
L	0.35	0.45

Suggested Land Pattern



Symbol	Dimension in Millimeters
	typ
X	(0.3)
X ₁	(0.45)
Y	(0.67)
Y ₁	(1.55)
Z	(0.87)
P	(0.5)
P ₁	(1.0)

Tape & reel specification - DFN2510-10L



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	4.00±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