

ME1V5U4BAGS

1. Features

- 18Watts peak pulse power ($t_p = 8/20\mu s$)
- Solid-state silicon-avalanche technology
- Capacitance: 0.25pF TYP.
- Low clamping voltage
- Low leakage current
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test Air discharge: $\pm 15KV$ Contact discharge: $\pm 12KV$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5(Lightning) 5A (8/20us)

2. Application

- USB3.0/3.1/ Type-C
- Thunderbolt interface
- DisplayPort interface
- Handheld portable application

3. Mechanical Data

- Package: DFN2510-10L
- UL Flammability Classification Rating 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

4. Absolute Maximum Rating

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 12 ± 15	KV
Peak Pulse Power(8/20 μs)	P_{PP}	18	W
Reverse Working Voltage	V_{RWM}	1.5	V
Peak Pulse Current	I_{PP}	5	A
Operating Temperature	T_{OPT}	-55~+125	°C
Storage Temperature	T_{stg}	-55~+150	°C

5. Pinning information

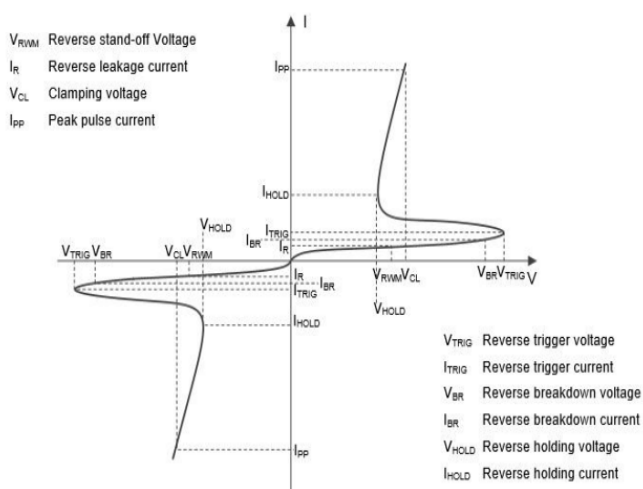
Pin	Polarity	Simplified outline	Equivalent Circuit	Marking	Package
10	Bi			1SN4	DFN2510-10L

6. Electrical Characteristics (T_{amb}=25°C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				1.5	V
Reverse Breakdown Voltage	V _{BR}	I _T =0.1mA	3.0			V
Reverse Leakage Current	I _R	V _{RWM} =1.5V			0.1	uA
Reverse Holding Current	V _{Hold}	I _{Hold} =10mA		1.4		V
Clamping Voltage	V _C	I _{pp} =1A, t _p =8/20us		1.85		V
Clamping Voltage	V _C	I _{pp} =4A, TP=8/20us		3.2		V
Junction Capacitance IO-GND	C _J	V _R =1V, f=1MHz		0.25	0.35	pF
Junction Capacitance IO-IO	C _J	V _R =0V, f=1MHz		0.13		pF

7. Electrical Parameters

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage@I _{PP}
V _{RWM}	Reverse Working Voltage
I _R	Maximum Reverse Leakage Current
I _{BR}	Test Current
V _{BR}	Breakdown Voltage@I _T
V _{SB}	Snapback Voltage
I _{SB}	Snapback Test Current
V _{TRIG}	Reverse Trigger Voltage
I _{TRIG}	Reverse Trigger Current
V _{HOLD}	Reverse Holding Voltage
I _{HOLD}	Reverse Holding Current



8. Typical Characteristics

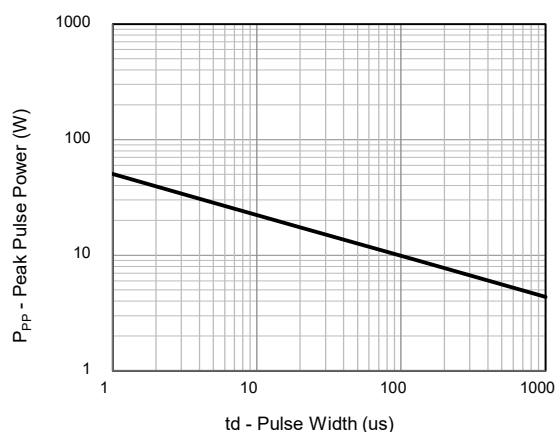


Figure 1. Peak Pulse Power Rating

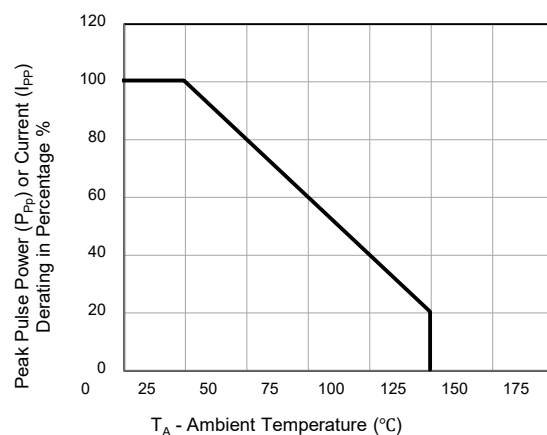


Figure2. Pulse Derating Curve

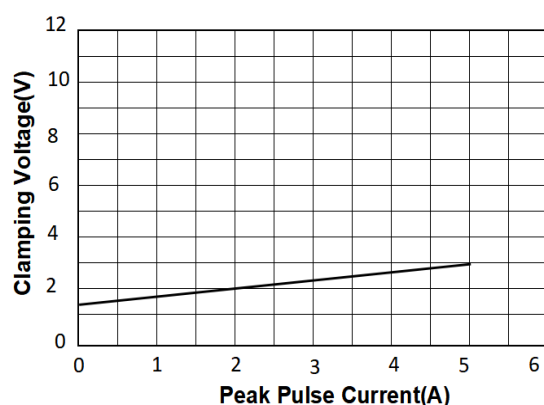


Figure 3. Typical Clamping Voltage

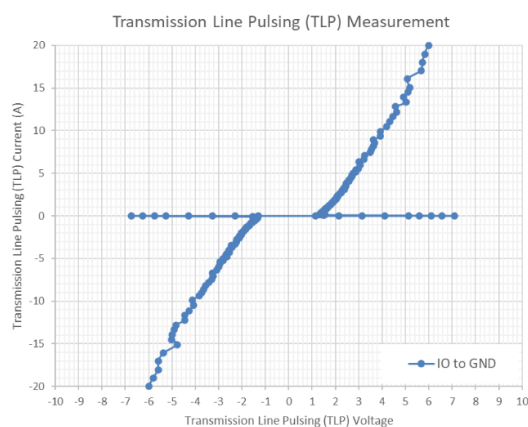
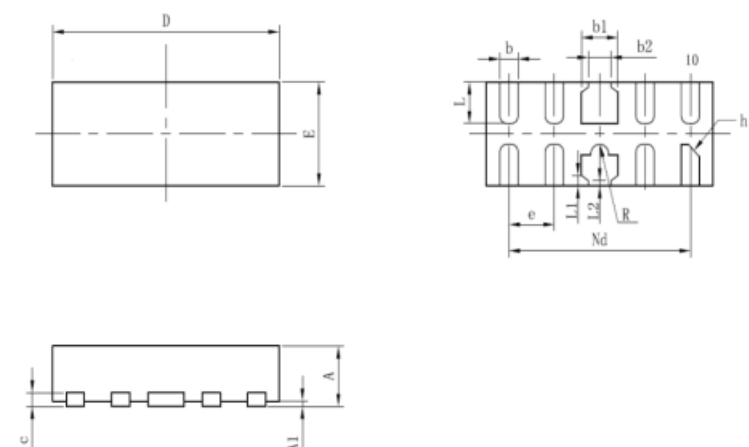


Figure 4. TLP(1/100nS)

9.Outline Drawing

DFN2510-10L Package Outline Dimensions



REF	mm	inch
A	0.45~0.55	0.018~0.022
A1	0.00~0.05	0.000~0.002
b	0.15~0.25	0.006~0.01
b1	0.35~0.45	0.014~0.018
b2	0.13~0.3	0.005~0.012
c	0.1~0.2	0.004~0.008
D	2.40~2.60	0.094~0.102
e	0.50BSC	0.020BSC
Nd	2.00BSC	0.079BSC
E	0.90~1.10	0.035~0.043
L	0.30~0.50	0.012~0.020
L1	0.075REF	0.003REF
L2	0.05REF	0.002REF
h	0.08~0.15	0.003~0.006
R	0.05~0.15	0.002~0.006

10. Reel packing

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	QTY/Box (pcs)	Q'TY/Carton (pcs)
DFN2510	7'	178	3,000	3 0,000	120,000

11.Important Notice and Disclaimer

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