



PROTECTION PRODUCTS

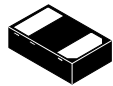
Feature:

- ESD/Surge Protection for 1 Line with Unidirectional.
- Provide ESD protection for each line to IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air / contact)
IEC 61000-4-5 (Lightning) 120A (8/20 μs)
- For operating voltage of 7.0V and below
- High surge protection
- Fast turn-on and Low clamping voltage
- Green Part

Application:

- Power Supply Protection
- USB VBUS Protection
- Cellular Handsets and Accessories
- Small Panel Modules
- PDA's
- Portable Devices
- Digital Cameras
- Touch Panels
- Notebooks and Handhelds
- MP3 Players
- Peripherals

Circuit Diagram & Pin Configuration:



DFN1610-2



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
ESD16D7V0U1S182L	07	8000/Tape&Reel



Ordering Information per line@25°C(unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak pulse power (tp = 8/20µs)	Ppk	1800	W
ESD Protection – Contact Discharge, per IEC 61000-4-2	VESD_CONTACT	± 30	kV
ESD Protection – Air Discharge, per IEC 61000-4-2	VESD_AIR	± 30	
Junction temperature	TJ	-55 to +125	°C
Operating temperature	TOP	-55~85	°C
Lead temperature	TL	260	°C
Storage temperature	TSTG	-55~150	°C

Electrical Characteristics per line@25°C(unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	VRWM	—	—	7.0	V	
Reverse Breakdown Voltage	VBR	7.5	—	—	V	IR = 1mA,
Reverse Leakage Current	IR	—	—	1	uA	VR = 7.0V,
Clamping Voltage	VC	—	—	12	V	Ipp = 10A, 8/20µs
Clamping Voltage	VC	—	—	15	V	Ipp = 120A, 8/20µs
Junction Capacitance	CJ	—	—	750	pF	VR = 0V, f = 1MHz

Note: Electrical parameters are only for die, performance may alter after assembly.



Typical Characteristics

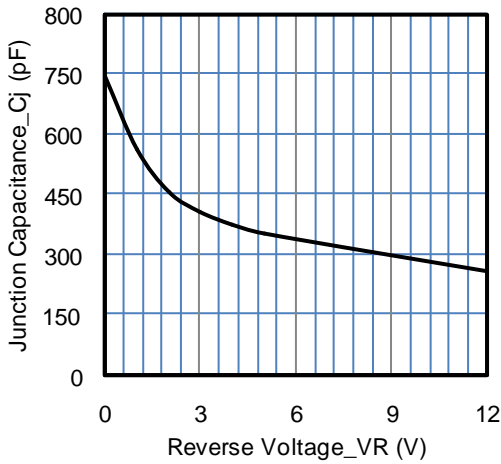


Fig1. Junction Capacitance vs. Reverse Voltage

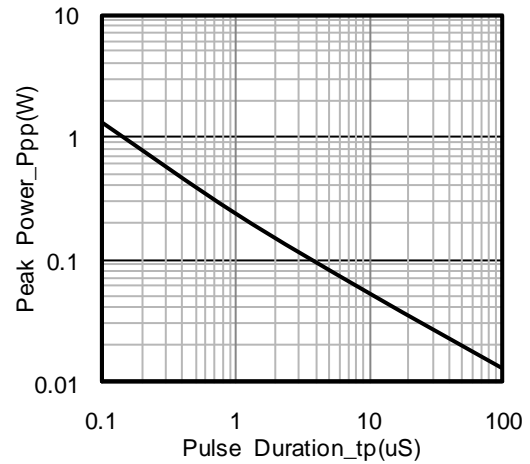


Fig2. Peak Pulse Power vs. Pulse Time

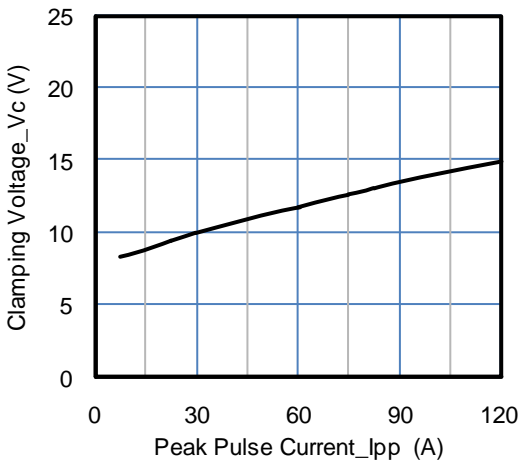


Fig3. Clamping Voltage vs. Peak Pulse Current

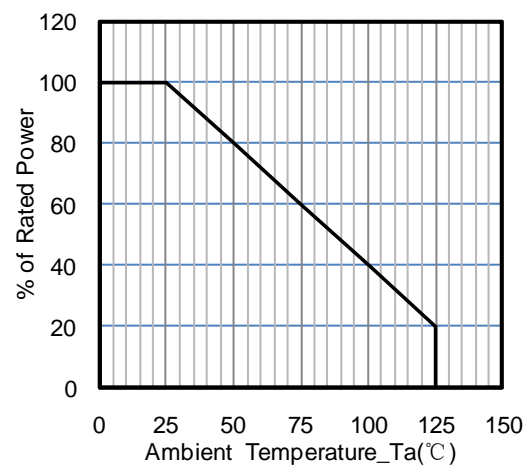


Fig4. Power Derating Curve

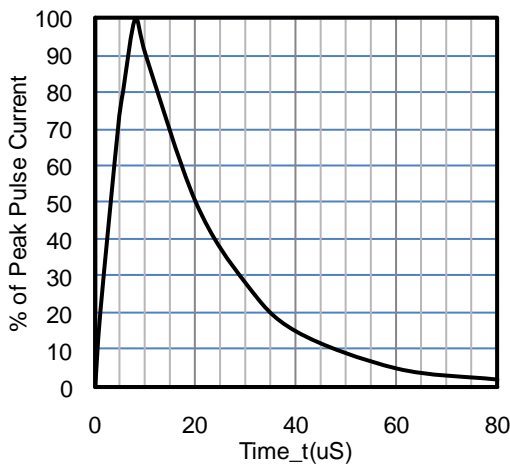


Fig 5. 8 X 20uS Pulse Waveform

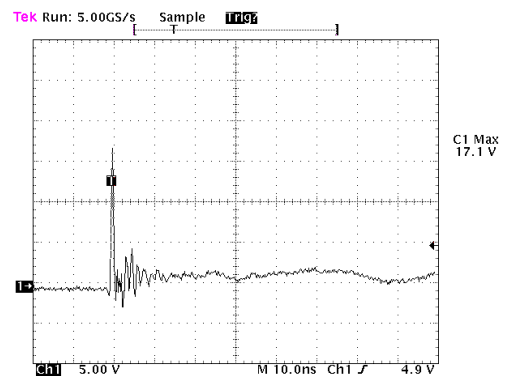
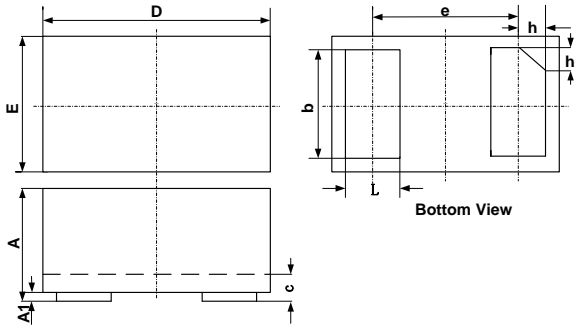


Fig 6. ESD Clamping Voltage 8 kV Contact per IEC61000-4-2



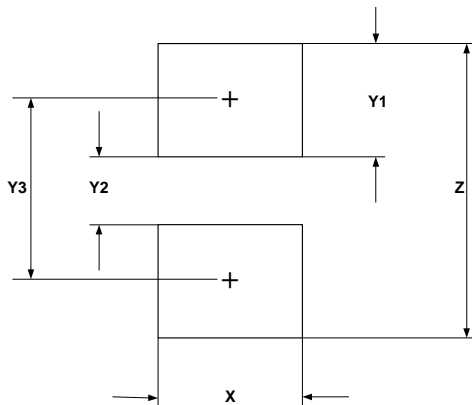
Dimension (DFN1610-2)

DFN1610-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10 BSC			0.044 BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
h	0.15	0.20	0.25	0.006	0.008	0.010

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.00	0.040
Y1	0.62	0.025
Y2	0.60	0.024
Y3	1.22	0.049
Z	1.85	0.074



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