

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

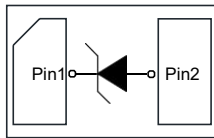


PLED

Product data sheet



**DFN1610-2L**



**Circuit diagram**

**Features**

- Ultra small package: 1.6x1.0x0.5mm
- Protects one data or power line
- Low leakage current
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
- RoHS Compliant and Halogen Free

**Applications**

- Mobile Phones
- Battery Protection
- Power Line Protection
- Vbat pin for Mobile Devices
- Hand Held Portable Applications

**Mechanical Characteristics**

- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 1 per J-STD-020

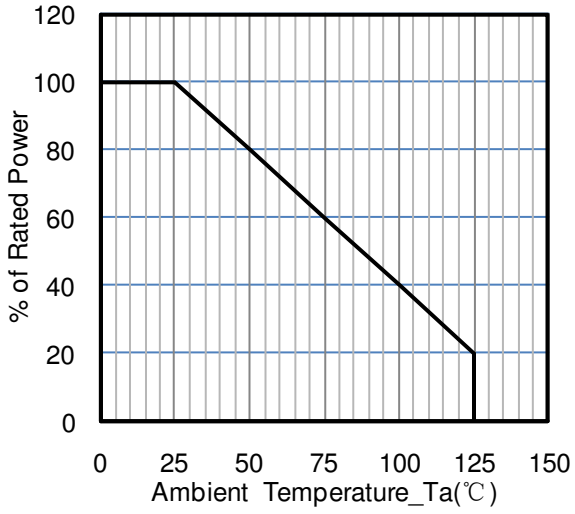
**Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	700	W
Peak Pulse Current (8/20µs)	Ipp	17	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-40 to +150	°C
Storage Temperature Range	Tstg	-55 to +150	°C

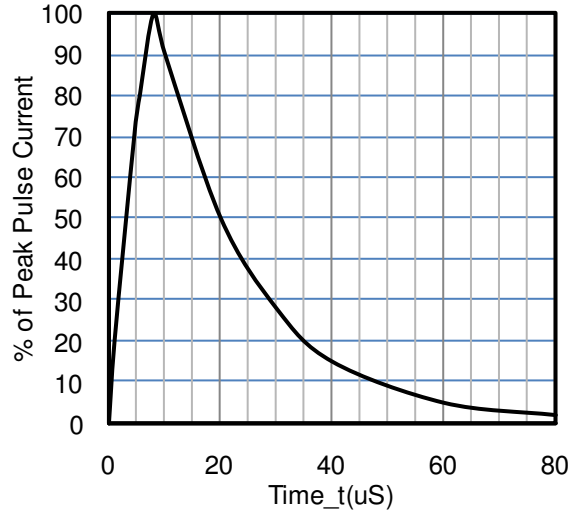
**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			24	V	
Breakdown Voltage	V <sub>BR</sub>	25.5		28.5	V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.1	µA	V <sub>R</sub> = 24V
Clamping Voltage	V <sub>C</sub>			32	V	I <sub>PP</sub> = 10A (8 x 20µs pulse)
Clamping Voltage	V <sub>C</sub>			35	V	I <sub>PP</sub> = 17A (8 x 20µs pulse)
Junction Capacitance	C <sub>J</sub>		100		pF	V <sub>R</sub> = 0V, f = 1MHz

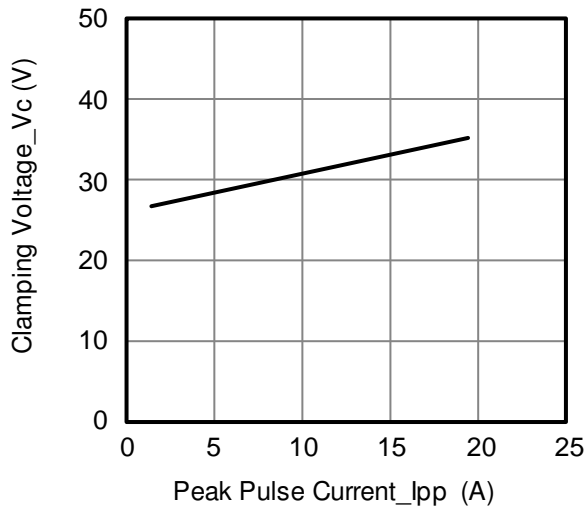
**Typical Performance Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**



**Fig1. Power Derating Curve**

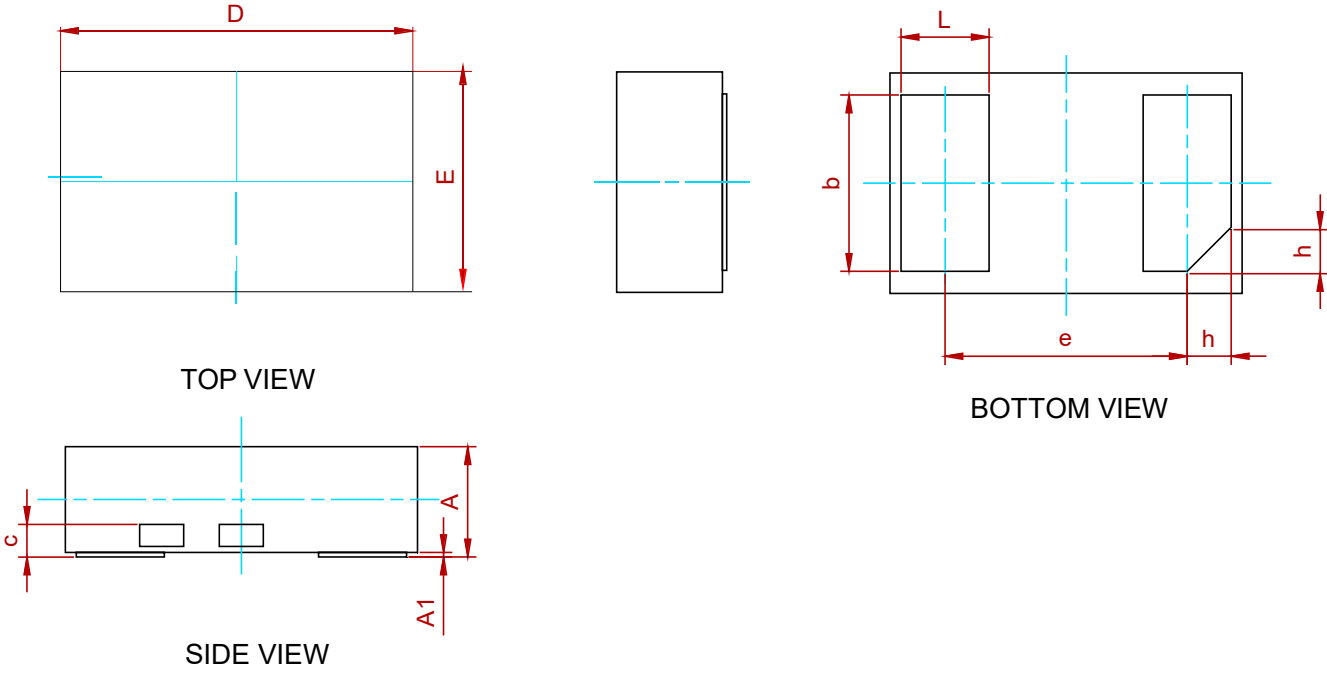


**Fig2. 8 X 20uS Pulse Waveform**



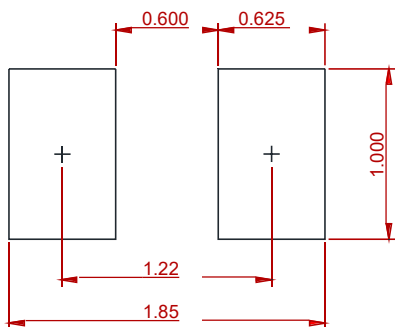
**Fig3. Clamping Voltage vs. Peak Pulse Current**

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
c	0.15 Ref.		
b	0.75	0.80	0.85
L	0.35	0.40	0.45
D	1.55	1.60	1.65
E	0.95	1.00	1.05
e	1.10 BSC		
h	0.20 Ref.		

**Recommend PCB Layout (Unit: mm)**



**Notes:**

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

**REEL SPECIFICATION**

P/N	PKG	QTY
LTVS16H24T5G-MS	DFN1610-2L	3000

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