LESDA6V1W6T1G
# S-LESDA6V1W6T1G
Transil array for data protection

General Description

The LESDA6V1W6T1G is a monolithic suppressor designed to protect components connected to data and transmission lines against ESD. The device clamp the voltage just above the logic level supply for positive transients, and to a diode drop below ground for negative transients.

Applications

- Computers
- Printers
- Communication systems
- Cellular phones handsets and accessories
- Wireline and wireless telephone sets
- Set top boxes

Features

- 5 Unidirectional Transil functions
- Breakdown voltage:
- V_{BR} = 6.1 V min. and 25 V min.
- Low leakage current: < 1 mA
- Very small PCB area < 4.2 mm_2 typically
- High ESD protection level: up to 25 kV
- High integration
- Device marking:WF
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Complies with the following standards

IEC61000-4-2

Level 4   15 kV (air discharge)

9 kV(contact discharge)

MIL STD 883E - Method 3015-7 Class 3

25 kV HBM (Human Body Model)

SOT-363

Functional diagram
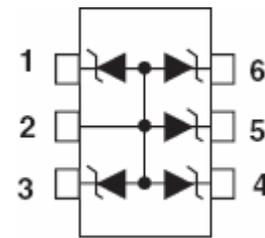
LESDA6V1W6T1G

Absolute Ratings (T$_{amb}$=25°C)

Symbol	Parameter		Value	Units
P$_{PP}$	Peak Pulse Power (t_p = 8/20μs)	LESDA6V1W6T1G	100	W
T$_L$	Maximum lead temperature for soldering during 10s		260	°C
T$_{stg}$	Storage Temperature Range		-40 to +125	°C
T$_{op}$	Operating Temperature Range		-40 to +125	°C

Electrical Parameter

Symbol	Parameter
V_{RM}	Stand-off voltage
V_{BR}	Breakdown voltage
V_{CL}	Clamping voltage
I_{RM}	Leakage current
I_{PP}	Peak pulse current
I_R	Reverse current
I_F	Forward current
αT	Voltage temperature coefficient
V_F	Forward voltage drop
C	Capacitance
R_d	Dynamic
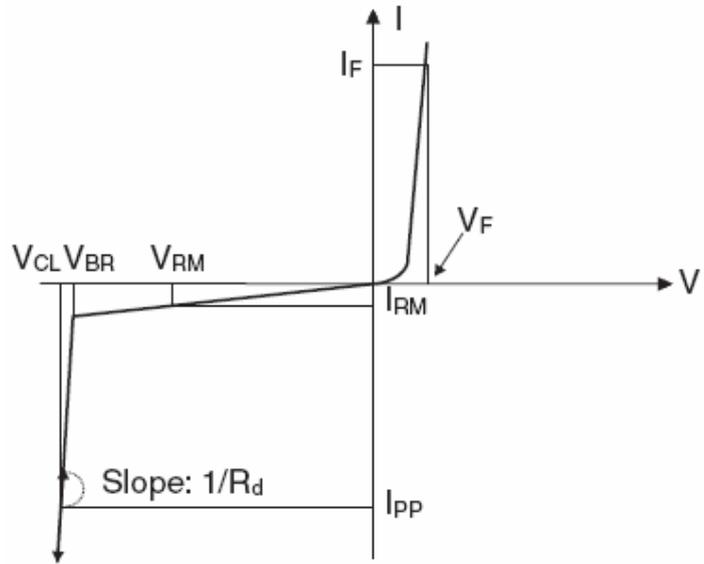
Electrical Characteristics

Part Numbers	V_{BR}		I_R	V_{RM}	I_{RM}	V_F	I_F	R_d	α T	C
	Min.	Max.				Max.		Typ.[1]	Max.[2]	Typ. 0v bias
	v	v	mA	v	μA	v	mA	Ω	$10^{-4}/°C$	pF
LESDA6V1W6T1G	6.1	7.2	1	5	1	1.25	200	0.61	6	50

1. Square pulse I_{PP}=15A, t_p=2.5μS   2. V_{BR}=aT*(T_{amb}−25°C)*V_{BR}(25°C)

Typical Characteristics
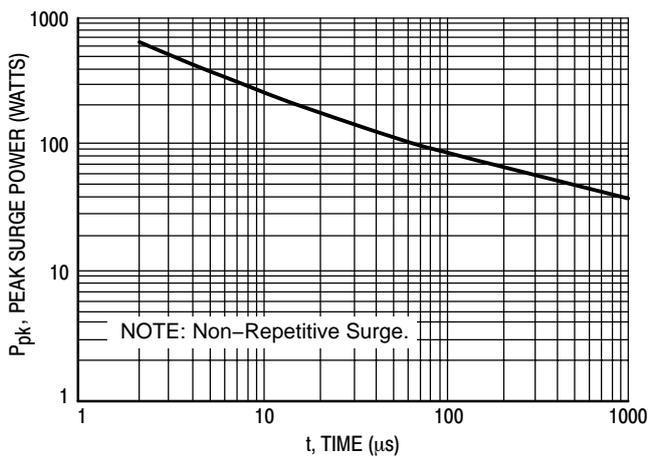
Figure 1. Pulse Width
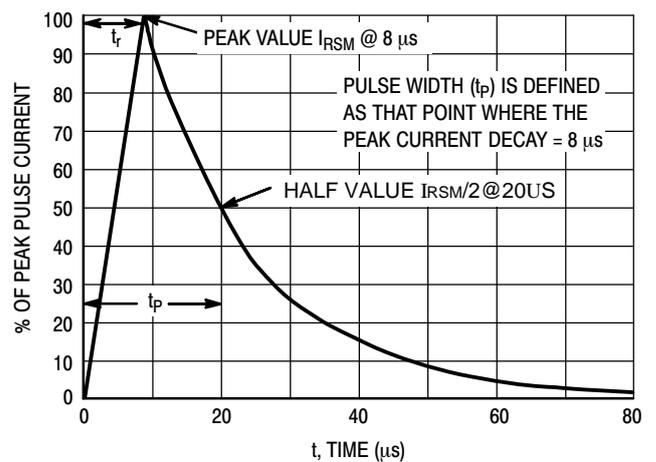

Figure 2. 8 x 20 μs Pulse Waveform
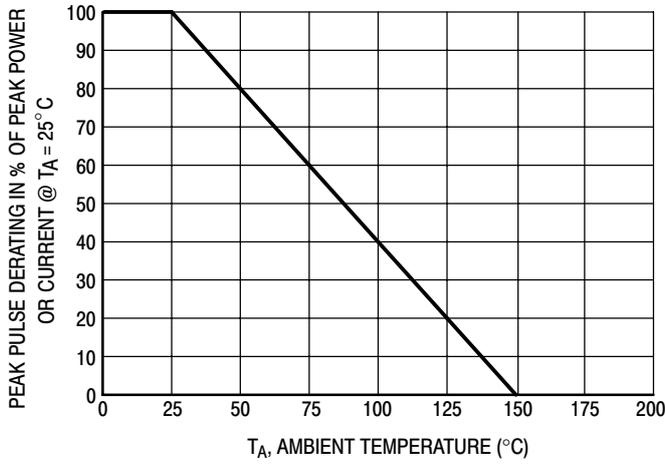
Figure 3. Pulse Derating Curve
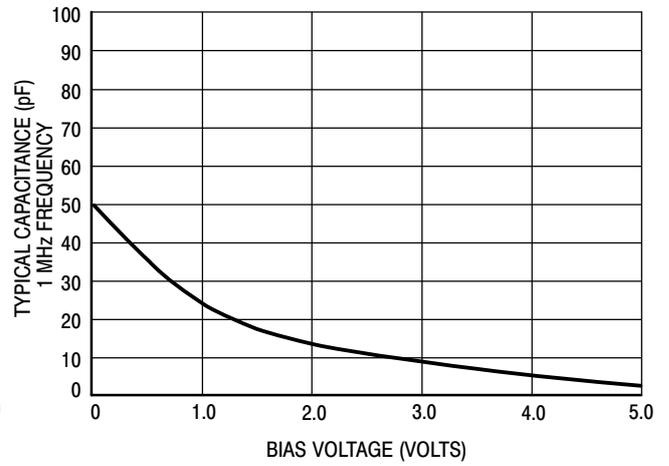
Figure 4. Capacitance
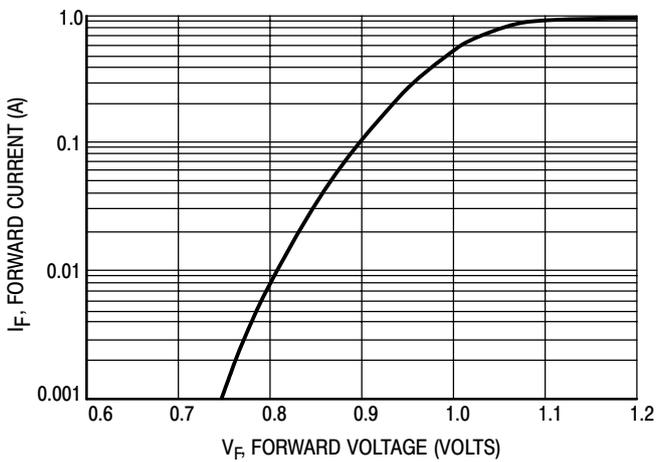
Figure 5. Forward Voltage
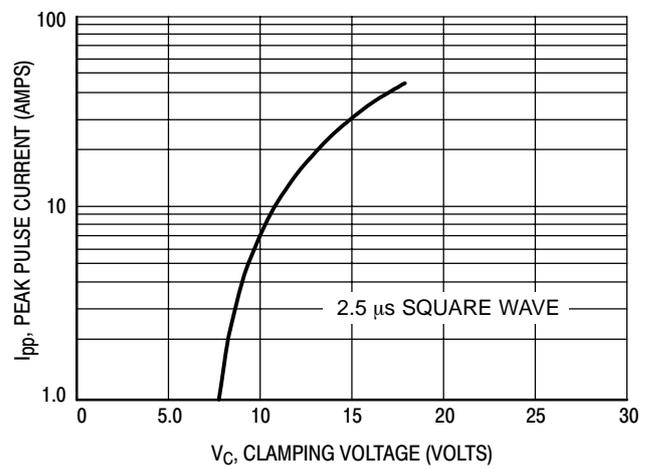
Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)
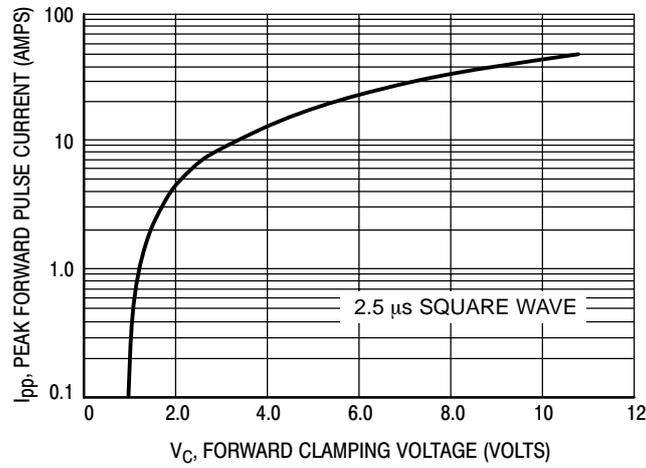
Figure 7. Clamping Voltage versus Peak Pulse Current (Forward Direction)

Package mechanical data

SOT-363   Package

REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.8	1.1	0.031	0.043
A1	0	0.1	0	0.004
A2	0.8	1	0.031	0.039
b	0.15	0.3	0.006	0.012
c	0.1	0.18	0.004	0.007
D	1.8	2.2	0.071	0.086
E	1.15	1.35	0.045	0.053
e	0.65 Typ.		0.025 Typ.	
H	1.8	2.4	0.071	0.094
Q	0.1	0.4	0.004	0.016