DESCRIPTION

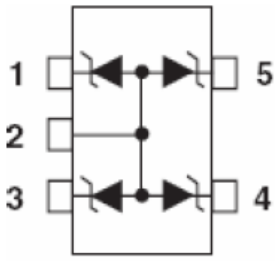
The ESDA6V1W5 is a monolithic suppressor designed to protect components connected to data and transmission lines against ESD. The device clamp the voltage just above the logic level supply for positive transients, and to a diode drop below ground for negative transients.

The ESDA6V1W5 is available in SC-88A package.

ORDERING INFORMATION

Package Type	Part Number
SC-88A	ESDA6V1W5
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



FEATURES

- 4 Unidirectional Transil functions
- Breakdown voltage:
  V_{BR} = 6.1V min. and 25V min.
- Low leakage current: <1mA
- Very small PCB area <4.2 mm2 typically
- High ESD protection level: up to 25kV
- High integration
  Complies with the following standards
  IEC61000-4-2
  Level 4 16kV (air discharge)
  9kV(contact discharge)
  MIL STD 883E-Method 3015-7 Class 3
  25kV HBM (Human Body Model)
- Available in SC-88A package

APPLICATIONS

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

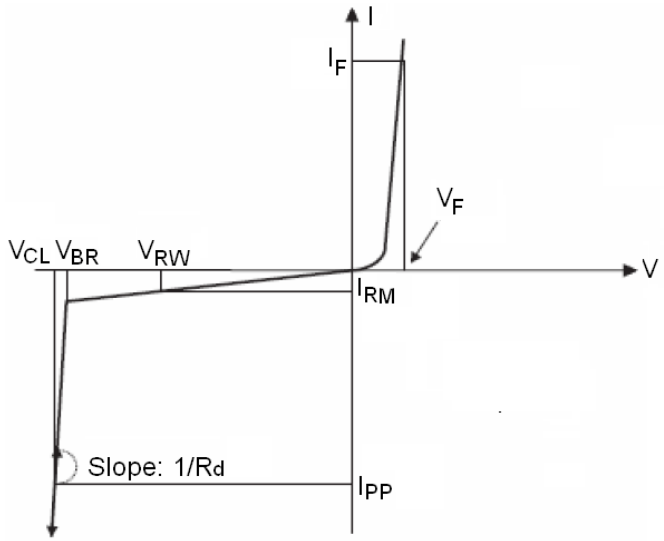
ABSOLUTE MAXIMUM RATINGS

T_{amb} = 25°C

P_{PP}, Peak Pulse Power (t_p = 8/20μs)	150W
T_L, Maximum lead temperature for soldering during 10s	260°C
T_{stg}, Storage Temperature Range	-40°C to +125°C
T_{op}, Operating Temperature Range	-40°C to +125°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

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 Number	V_{BR}		I_R	V_{RM}	I_{RM}	V_F	I_F	R_d	αT	C
	MIN	MAX				MAX		TYP NOTE1	MAX NOTE2	TYP 0v bias
	V	V	mA	V	μA	V	mA	Ω	10^{-4}/°C	pF
ESDA6V1W5	6.1	7.2	1	3	1	1.25	200	0.61	6	90

NOTE1: Square pulse I_{PP} = 15A, t_p = 2.5μs

NOTE2: V_{BR} = aT x (T_{amb}-25°C) x V_{BR} (25°C)

TYPICAL CHARACTERISTICS

Figure 1. Pulse Width

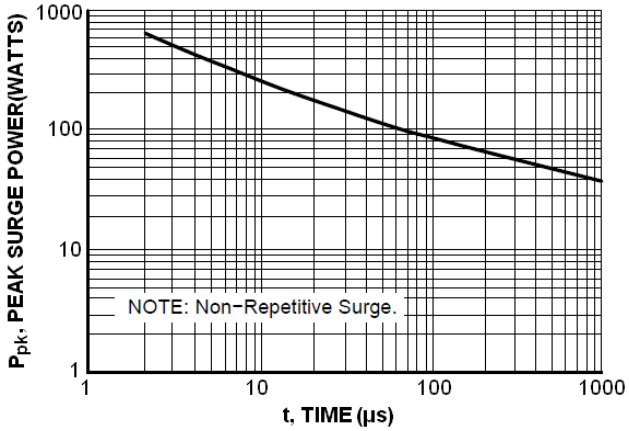


Figure 2. 8 x 20µs Pulse Waveform

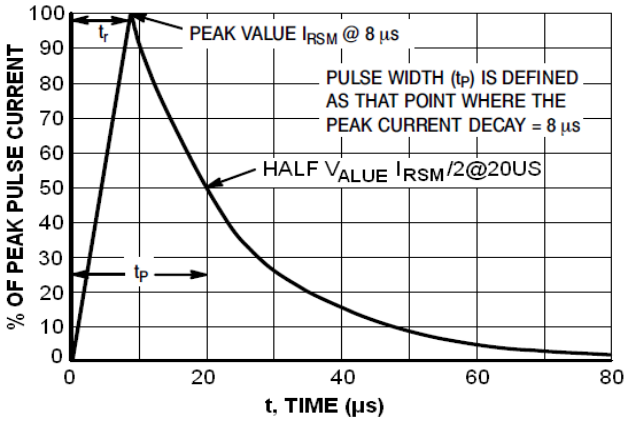


Figure 3. Pulse Derating Curve

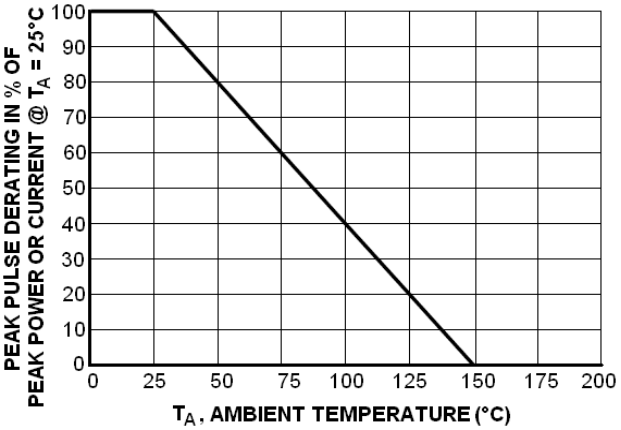


Figure 4. Capacitance

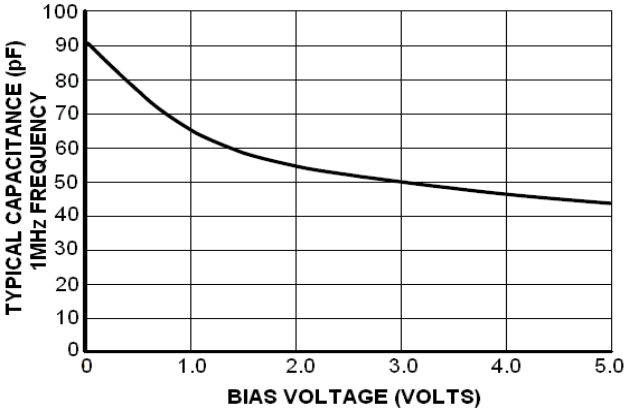


Figure 5. Forward Voltage

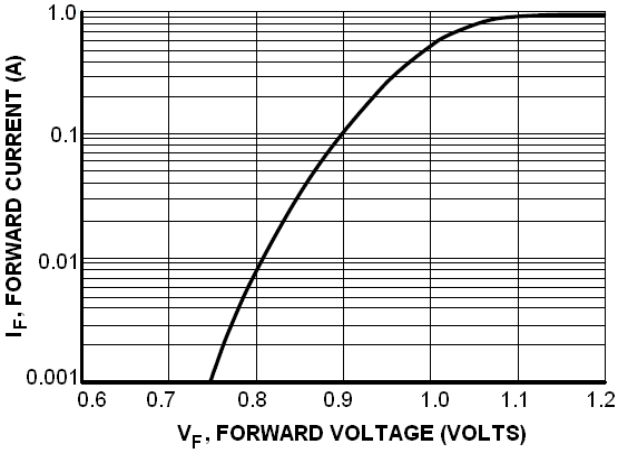
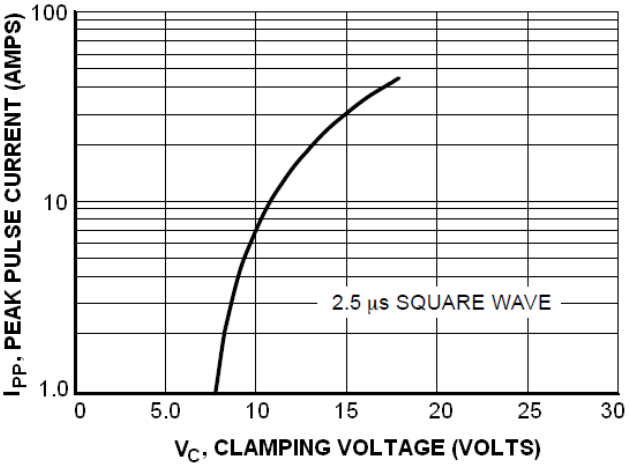
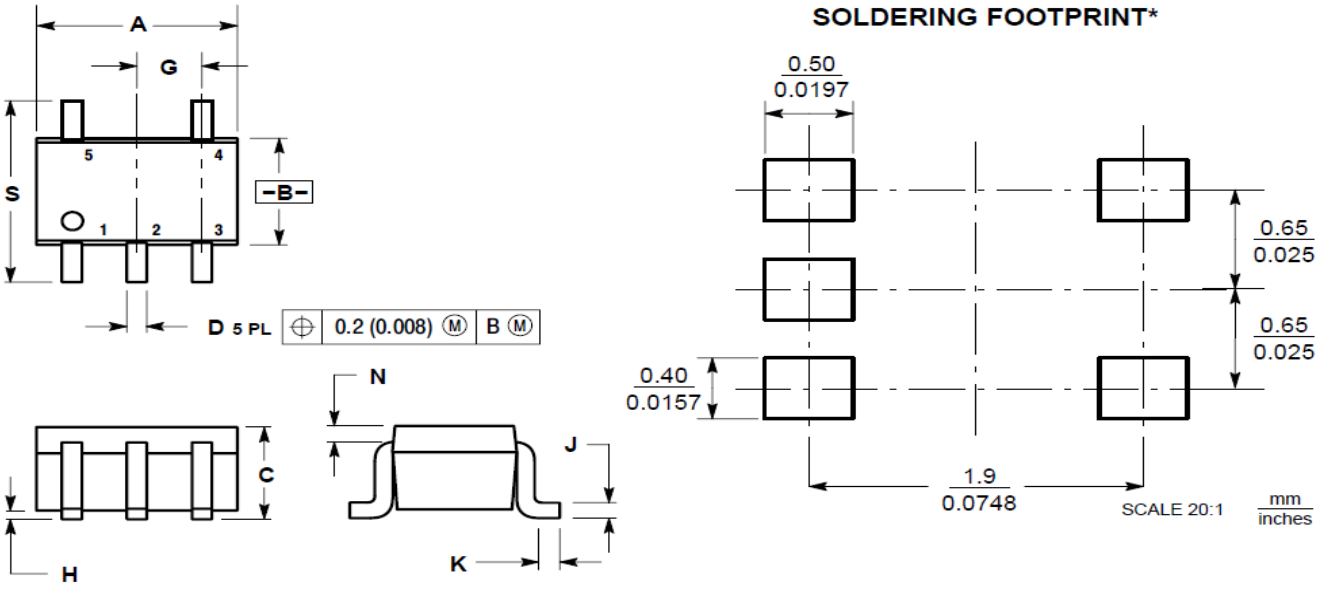


Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)



PACKAGE INFORMATION

Dimension in SC-88A Package (Unit: mm)



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	-	0.004	-	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20

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