DESCRIPTION

The TVS16H5.0 is available in DFN1610-2 Package

FEATURES

- 5V uni-directional ESD diode
- Low clamping voltage
- Complies with IEC 61000-4-2 standards:
  Air discharge: ±30kV
  Contact discharge: ±30kV
- Available in DFN1610-2 Package

ORDERING INFORMATION

Package Type	Part Number
DFN1610-2	TVS16H5.0
Note	SPQ: 8,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION

ABSOLUTE MAXIMUM RATINGS

T_A=25°C, unless otherwise specified

P_{PK}, Peak Pulse Power (8/20μs)	1250W
I_{PP}, Peak Pulse Current (8/20μs)	100A
T_J, Operating Temperature Range	-55ºC ~125ºC
T_{STG}, Storage Temperature Range	-55ºC ~150ºC

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 CHARACTERISTICS

T_A = 25°C, unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V_{RWM}		-	-	5	V
Breakdown Voltage	V_{BR}	I_T = 1mA	6	-	7.8	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	2	μA
Clamping Voltage	V_C	I_{PP}=10A (8 x 20μs pulse)	-	-	8.5	V
Clamping Voltage	V_C	I_{PP}= 80A (8 x 20μs pulse)	-	-	15	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	-	-	800	pF

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

TYPICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted

Figure1. Junction Capacitance vs. Reverse Voltage

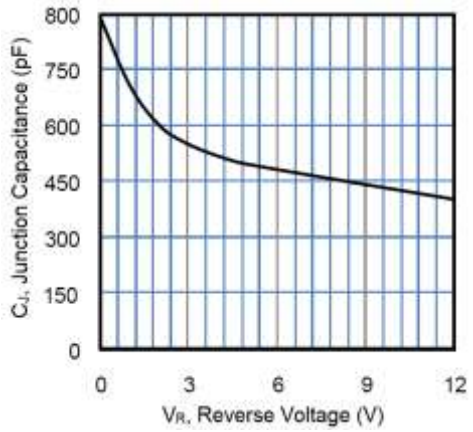


Figure 2. Clamping Voltage vs. Peak Pulse Current

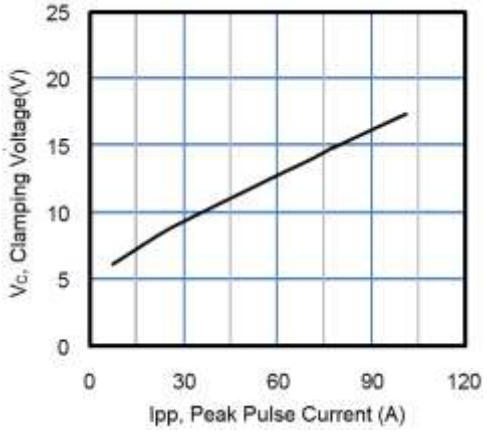


Figure 3. 8 X 20us Pulse Waveform

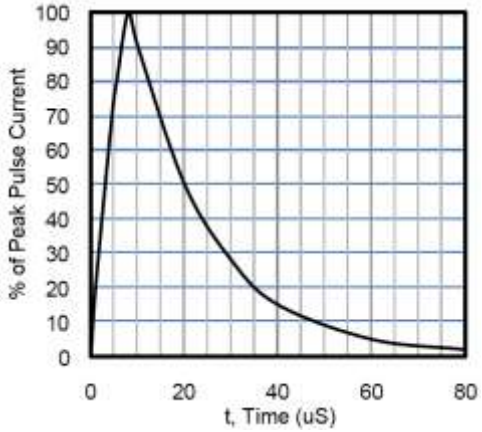


Figure 4. Power Derating Curve

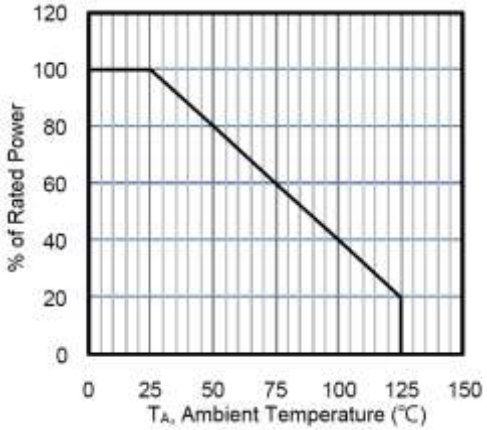


Figure 5. ESD Clamping Voltage

Positive 8 kV Contact per IEC61000−4−2

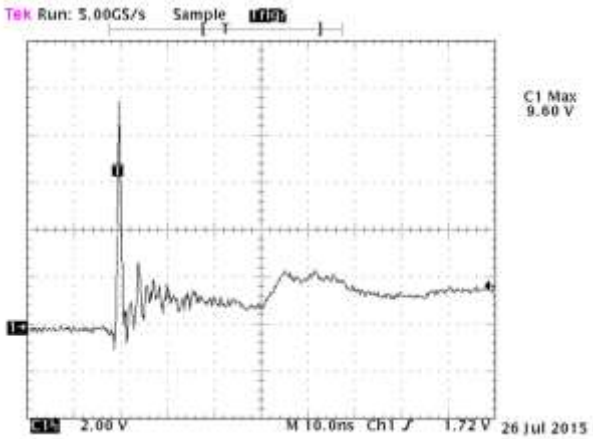
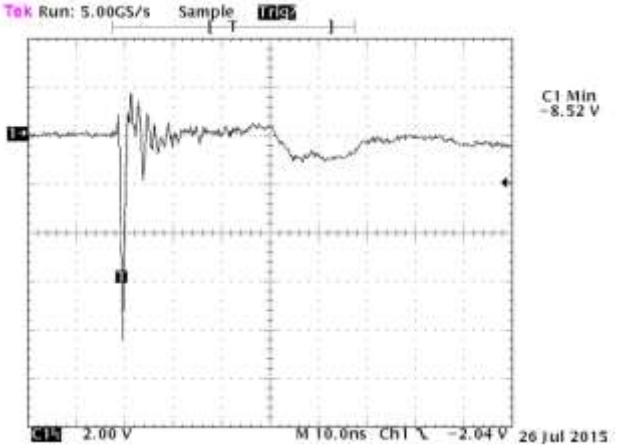


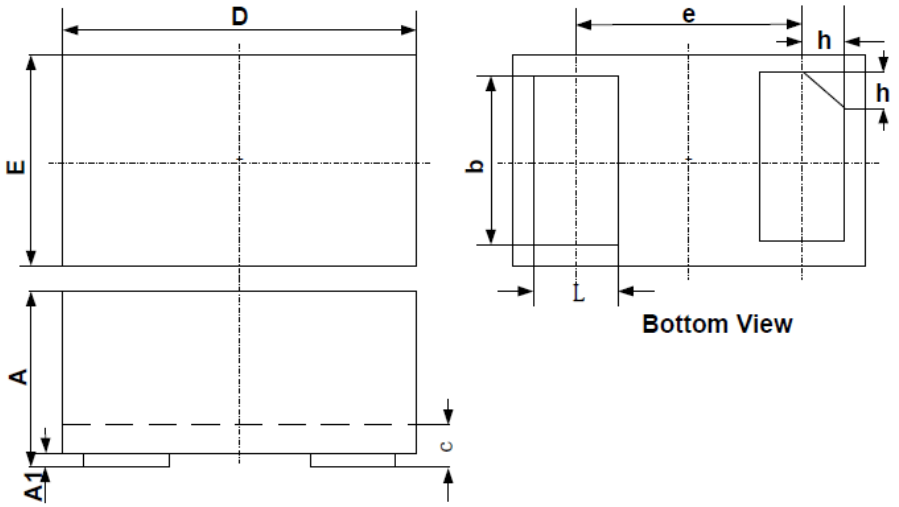
Figure 6. ESD Clamping Voltage

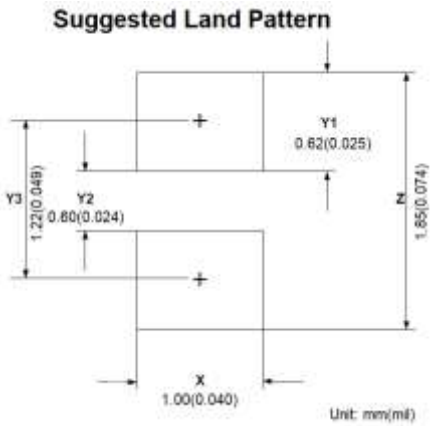
Negative 8 kV Contact per IEC61000−4−2



PACKAGE INFORMATION

Dimension in DFN1610-2 Package (Unit: mm)





Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
b	0.75	0.85	0.030	0.034
c	0.10	0.20	0.004	0.008
D	1.55	1.65	0.062	0.066
e	1.10BSC		0.044BSC	
E	0.95	1.05	0.038	0.042
L	0.35	0.45	0.014	0.018
h	0.15	0.25	0.006	0.010

IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or server property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.