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TPESD5V0S1ULD

1-Line Uni-directional TVS Diode

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Features

- Ultra low capacitance: 90pF (typ)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±30kV
  Contact discharge: ±30kV
- – IEC61000-4-5 (Lightning) 10A (8/20μs)
- – IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant
- Lead Finish: NiPdAu

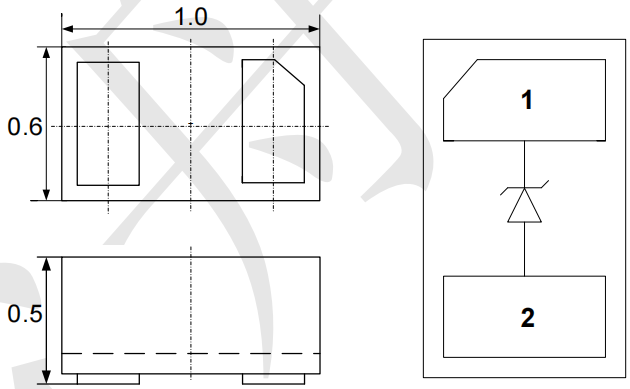
Mechanical Characteristics

- Package: DFN1006-2 (0402)
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :10000/7Inch Or 5000/7Inch Tape & Reel

Applications

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applicationss
- mobile telephon

Dimensions and Pin Configuration



A

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs) (Vcc-GND)	P_{pk}	150	W
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V_{ESD}	±30 ±30	kV
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{stg}	-55 to +150	℃

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6		9	V	I_T=1mA
Leakage Current	I_{Leak}			100	nA	V_{RWM}=5V
Clamping Voltage	V_C			11	V	I_{PP}=4.5A,Tp=8/20μs
Clamping Voltage	V_C			14	V	I_{PP}=10A,Tp=8/20μs
Junction Capacitance (I/O to GND)	C_J			90	pF	V_R=0V, f=1MHz,

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20μs Pulse Waveform

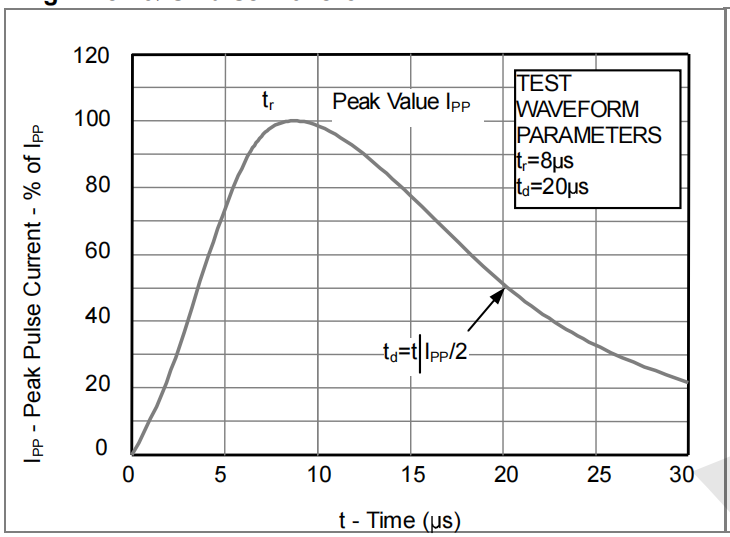


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

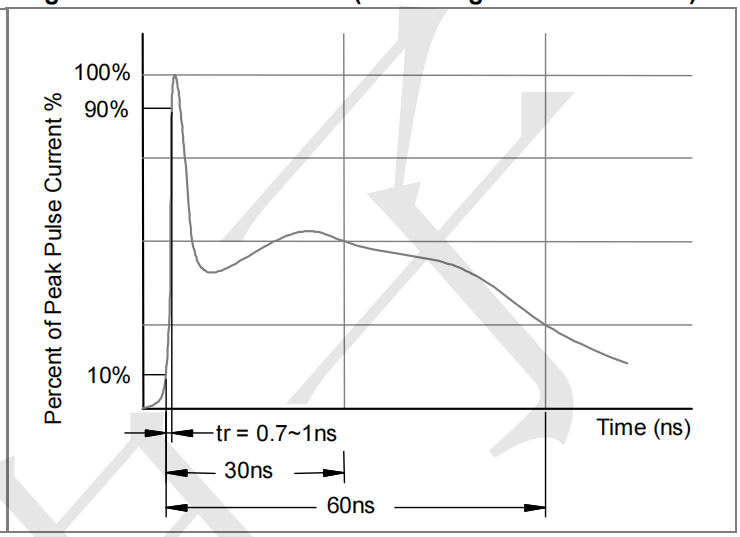
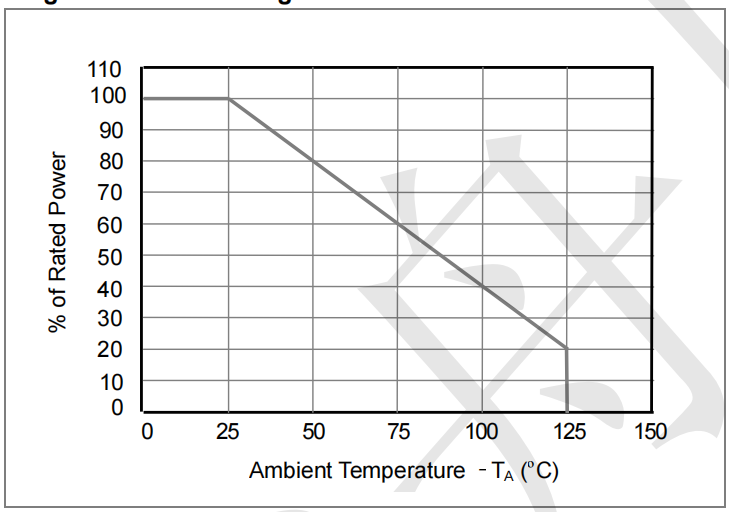
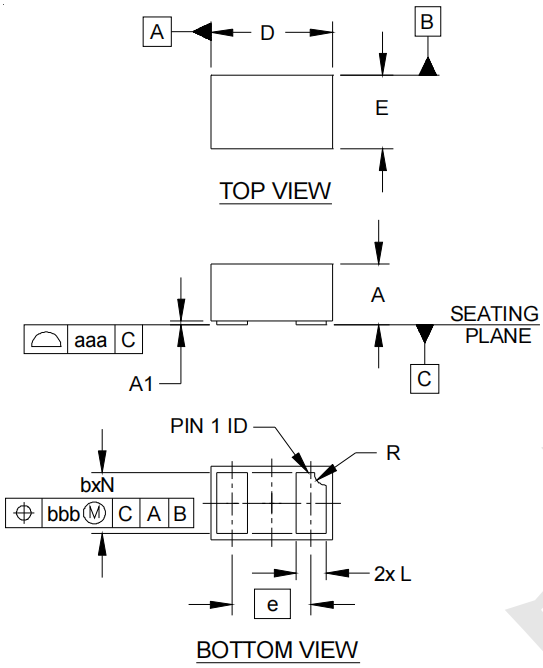


Fig3. Power Derating Curve

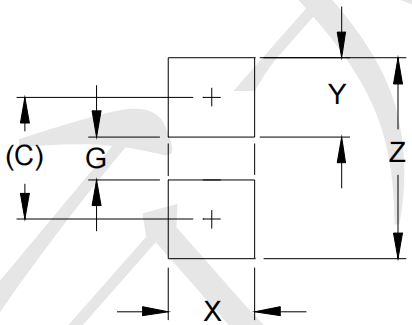


Outline Drawing - DFN1006-2



DIM	DIMENSIONS					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.016	.020	.022	0.40	0.50	0.55
A1	.000	.001	.002	0.00	0.03	0.05
b	.018	.020	.022	0.45	0.50	0.55
D	.035	.039	.043	0.90	1.00	1.10
E	.020	.024	.028	0.50	0.60	0.70
e	.026 BSC			0.65 BSC		
L	.008	.010	.012	0.20	0.25	0.30
R	.002	.004	.006	0.05	0.10	0.15
N	2			2		
aaa	.003			0.08		
bbb	.004			0.10		

Land Pattern - DFN1006-2



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.033)	(0.85)
G	.012	0.30
X	.024	0.60
Y	.022	0.55
Z	.055	1.40