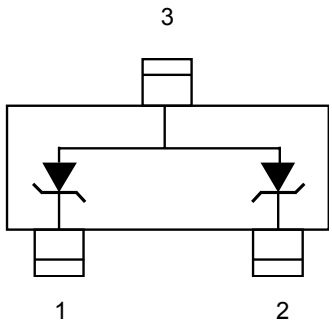
PESDLC523T5VU

Low Capacitance ESD Protector

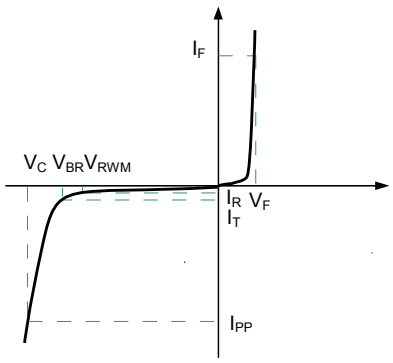
Description

The PESDLC523T5VU is a TVS array designed to protect I/O or data lines from the damaging effects of ESD. it is low capacitance transient voltage suppressors for high speed data interface that designed to protect sensitive electronics from damage or latch-up due to ESD lightning, and other voltage induced transient events. The SOT-523 is a very small package which allows space saving on high density printed circuit board and also gives the designer the flexibility to provide two I/O lines protection.All pins are rated to withstand 20kv ESD pulses using the IEC61000-4-2 contact discharge method, which can meet the requirement of level 4.



Feature

- SOT-523 package
- Protect up two data lines
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- 125 watts peak pulse power(Tp=8/20us)
- RoHS Compliant Transient Protection for High Speed Data Lines to IEC61000-4-2(ESD)±15kV(air),±8kV(Contact)



Applications

- High-Definition Multimedia Interface(HDMI)
- Mobile Display Digital Interface(MDDI)
- RF/Antenna Circuits
- USB 2.0&Firewire Ports
- HBT Power Amp Protection
- Transceiver Protection

Electrical characteristics per line@25℃(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_t = 1mA	5.6			V
Reverse Leakage Current	I_R	V_{RWM} = 5V			1	μA
Clamping Voltage	V_C	I_{PP} = 1A, t_P = 8/20μs pin1 to pin2			13.5	V
Clamping Voltage	V_C	I_{PP}= 5A, t_P = 8/20μs pin1or pin2 to pin3			20.0	V
Clamping Voltage	V_C	I_{PP}= 5A, t_P = 8/20μs pin1to pin2			23.0	V
Junction Capacitance	C_j	V_R=0V, f = 1MHz Pin1 to Pin2		1		pF

Absolute maximum rating@25℃

Rating	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μS)	P_{pp}	125	W
Peak Pulse Power (t_p=8/20μS)	I_{pp}	5.5	A
Operating Temperature	T_J	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Typical Characteristics

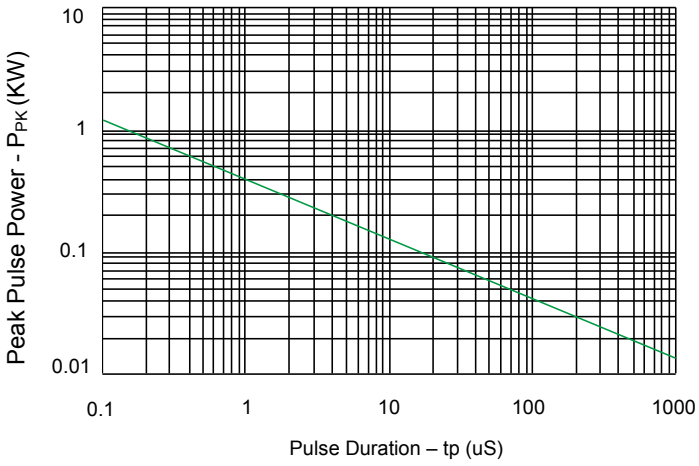


Fig1.Non-Repetitive Peak Pulse Power vs. Pulse time

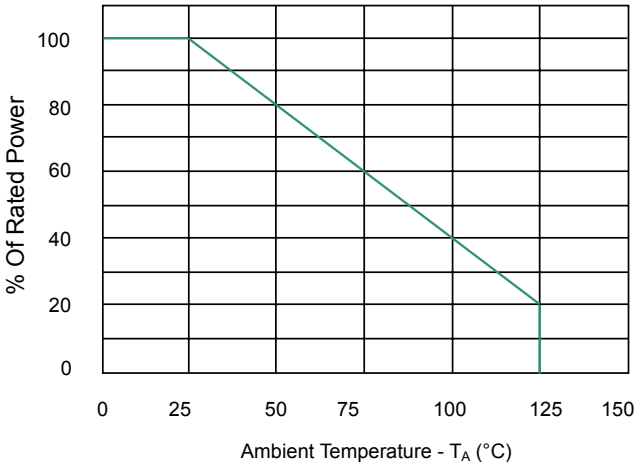


Fig2. Power Derating Curve

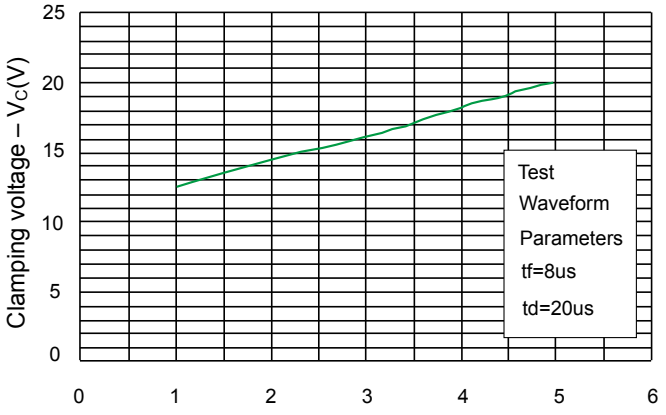


Fig 3.Clamping Voltage vs. peak Pulse Current
(Pin 1 to Pin 2)

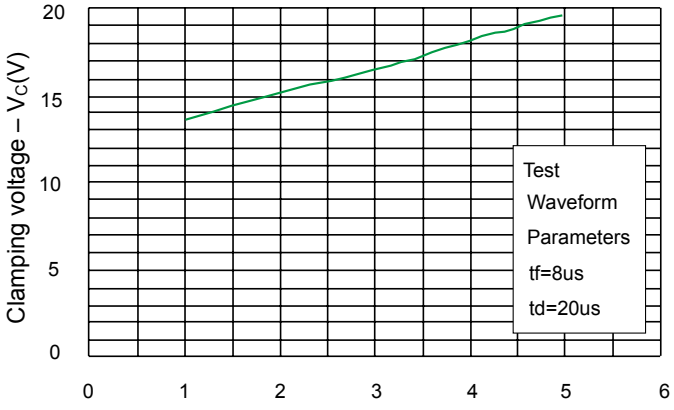
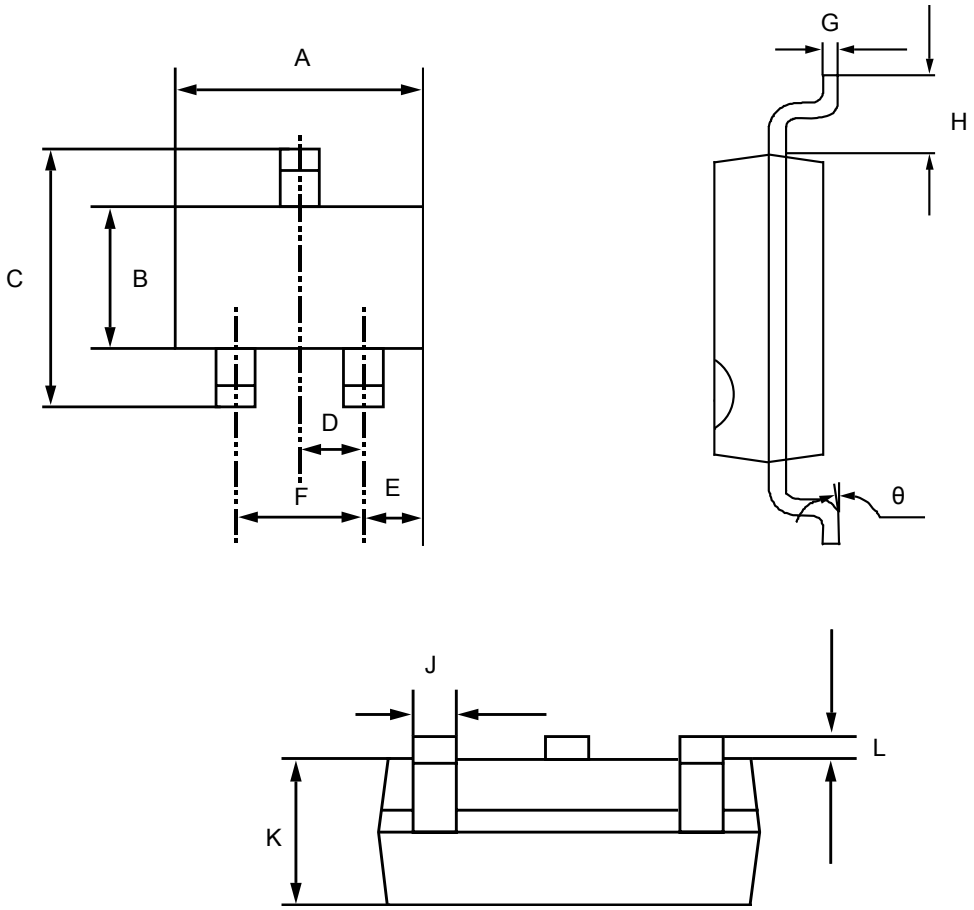


Fig.4 Clamping Voltage vs. peak Pulse Current
(Pin 1 or Pin 2 to Pin 3)

Product dimension



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	0.75	0.85	0.030	0.033
C	1.450	1.750	0.057	0.069
D	0.50BSC		0.020BSC	
E	0.30	0.33	0.012	0.015
F	0.900	1.100	0.035	0.043
G	0.100	0.200	0.004	0.008
H	0.550		0.022	
J	0.150	0.250	0.006	0.010
K	0.700	0.900	0.028	0.038
L	0.024	0.027	0.600	0.700
θ	0°	4°	0°	4°

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