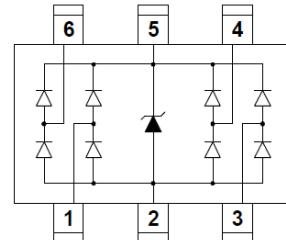
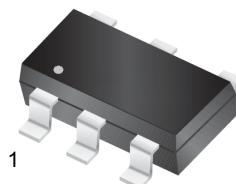


Low Capacitance ESD TVS Array in SOT23-6

Features

- 30Watts peak pulse power ($T_p = 8/20\mu s$)
- SOT23-6 Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (0.2pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
IEC 61000-4-2 ±8kV contact ±15kV air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 3A (8/20μs)



Mechanical Data

- **Case:** SOT23-6 (plastic package).
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

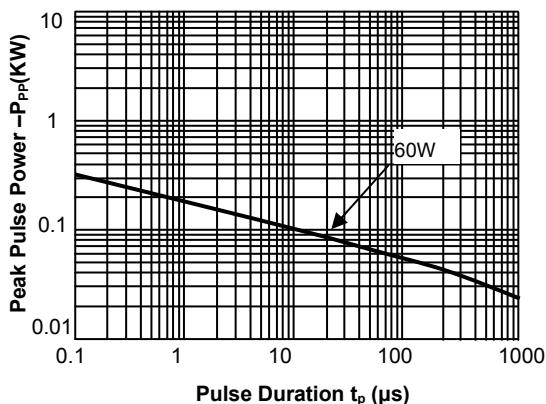
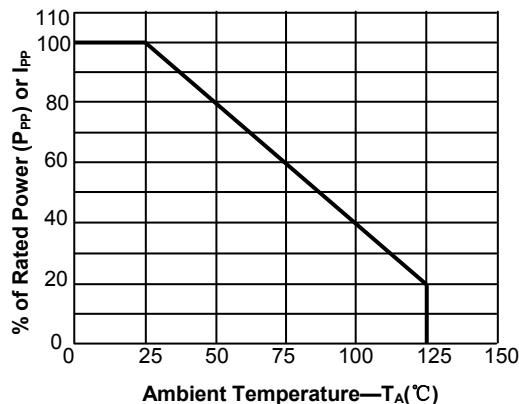
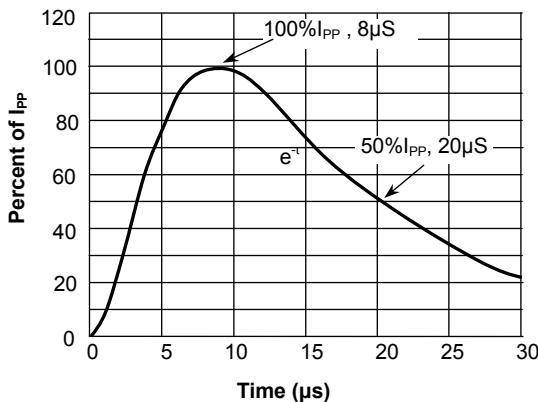
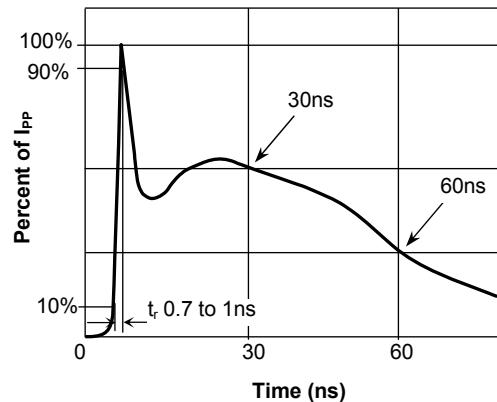
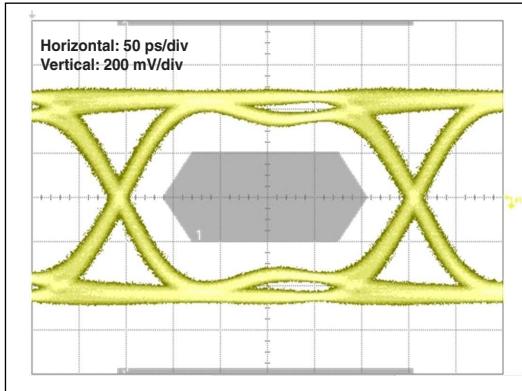
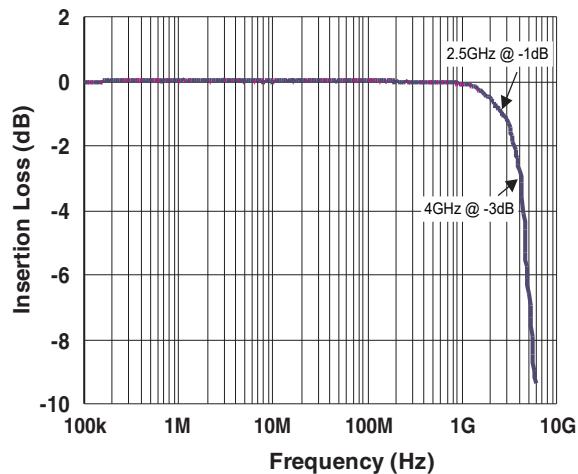
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P_{PP}	30	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	15/15	kV
Peak Pulse Current ($T_p = 8/20\mu s$)	I_{PP}	3.0	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

($T_A = 25$ °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.6	6.8		V
Reverse Leakage Current	I_R	$V_R=5V$		0.01	1	μA
Clamping Voltage(SURGE)	V_c	$I_{PP}=3A, T_p=8/20\mu s$		10	12	V
Clamping Voltage(ESD)	V_c	$V_{ESD} = +8kV$		12		V
Junction Capacitance	C_J	$V_R=0V, f=1MHz, I/O to I/O$		0.2		pF
	C_J	$V_R=0V, f=1MHz, I/O to GND$		0.4		pF

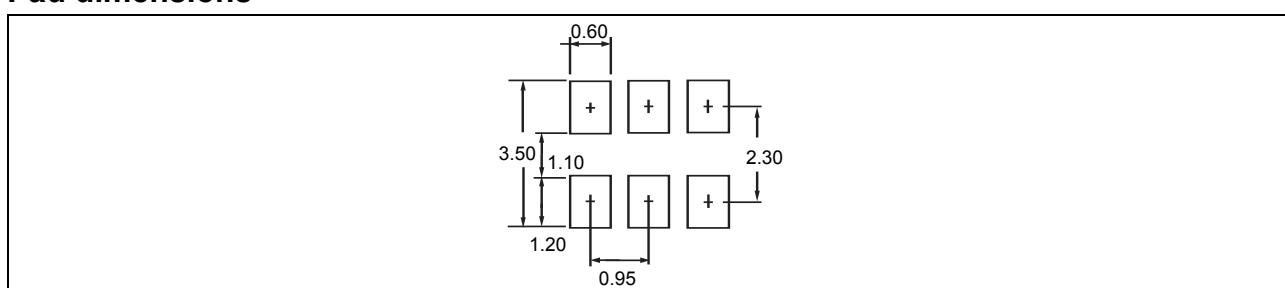
Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

Fig.2 Pulse Derating Curve

Fig.3 Pulse Waveform-8/20μs

Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

Fig.5 Eye Diagram - HDMI mask at 3.4Gbps per channel

Fig.6 Insertion Loss S21 - I/O to GND


Package Dimensions

Symbol	Dimensions in millimeters	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E1	1.500	1.700
E	2.650	2.950
e	0.950(BSC)	
e1	1.800	2.000
L	0.300	0.600
θ	0°	8°

Pad dimensions



Package information

Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOT-23-6	3.17	3.23	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
TEST236LC5VU	SOT23-6	Tape and reel	3000pcs / reel	EIA STD RS-481