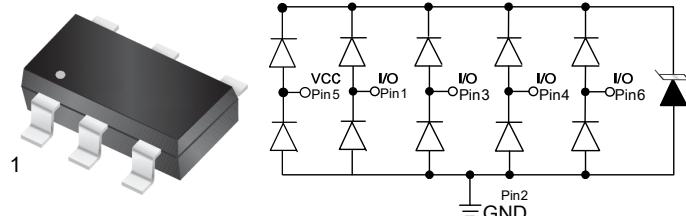


## Ultra Low Capacitance ESD TVS Array in SOT23-6

### 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 (0.15pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:  
IEC 61000-4-2 ±12KV 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
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Ethernet
- USB 3.0, USB 2.0, MHL
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

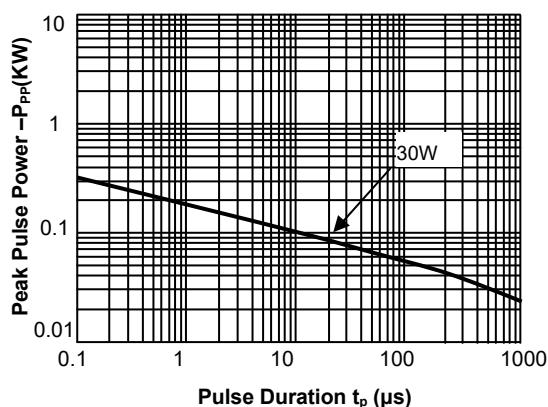
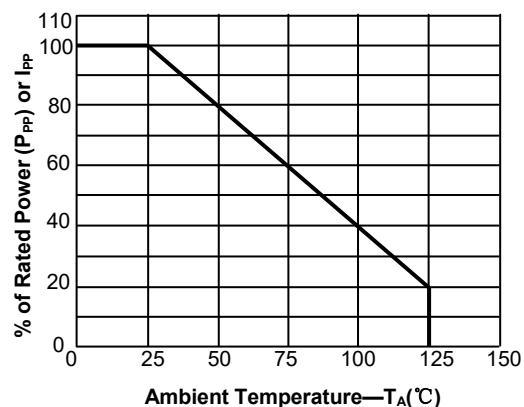
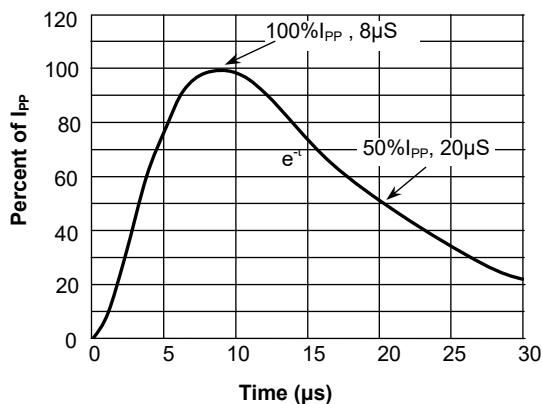
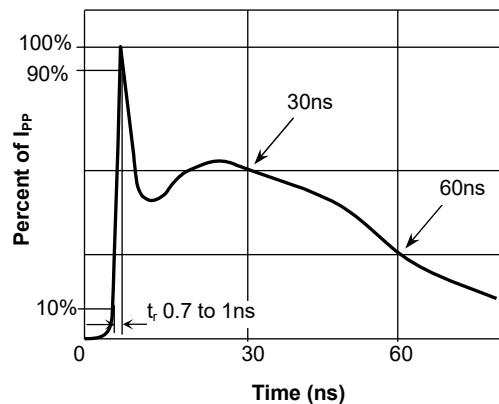
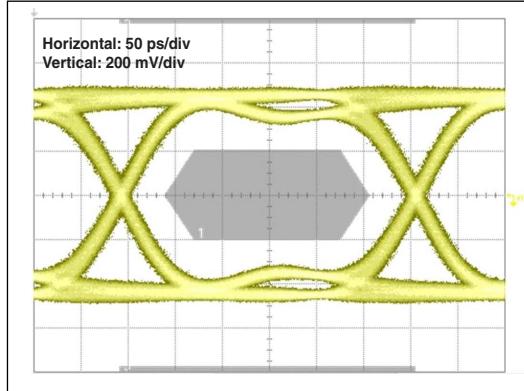
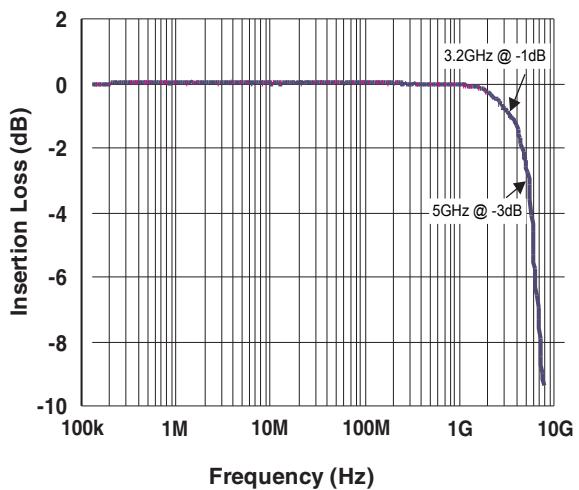
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	30	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	12/15	kV
Peak Pulse Current ( $T_p = 8/20\mu s$ )	$I_{PP}$	3.0	A
Junction Temperature	$T_J$	-55 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

### 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	$V_{BR}$	$I_T=1mA$	6	7.2		V
Reverse Leakage Current	$I_R$	$V_R=5V$		0.05	0.5	µA
Clamping Voltage(SURGE)	$V_C$	$I_{PP}=3A, T_p=8/20\mu s$		9		V
Clamping Voltage(ESD)	$V_C$	$V_{ESD} = +8kV$		10		V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz, I/O to I/O$		0.15		pF
	$C_J$	$V_R=0V, f=1MHz, I/O to GND$		0.3		pF

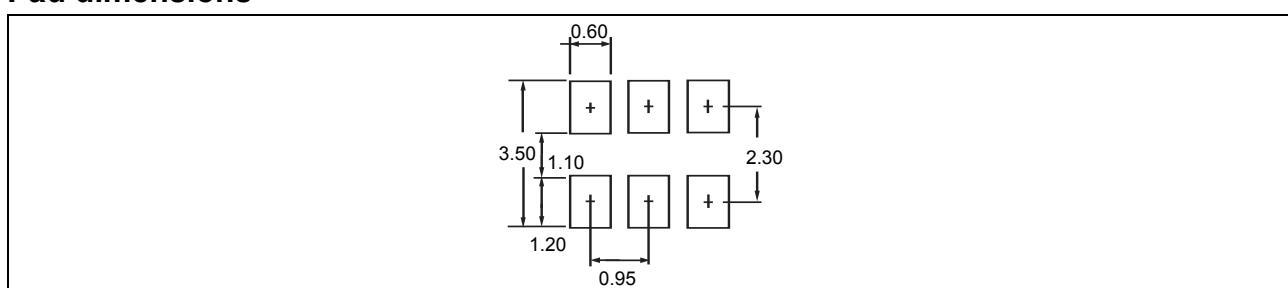
**Typical Characteristics** ( $T_{amb} = 25^{\circ}\text{C}$  unless otherwise specified)

**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 5Gbps 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
$\theta$	0°	8°

## Pad dimensions



## Package information

Pkg type	a	B	C	d	E	F	P0	P	P1	W
<b>SOT-23-6</b>										
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
TEST236UC5VU	SOT23-6	Tape and reel	3000pcs / reel	EIA STD RS-481