

**Applications**

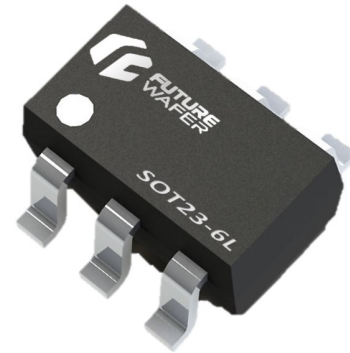
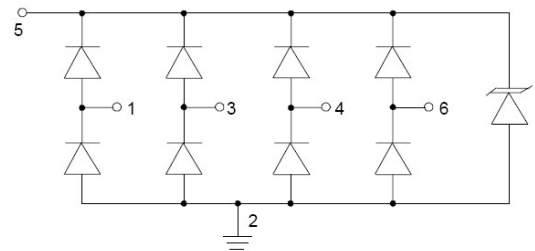
- Personal Digital Assistance
- Wireless System
- DVI
- High Speed Data Line
- Ethernet
- USB 2.0 Power and Data line Protection

**Feature**

- With TVS Diode
- ESD Protection:Level 4
- Low clamping voltage @ $I_{PP}=1A < 15V$
- 150 Watts peak pulse power per line( $t_p=8/20\mu s$ )
- Ultra low capacitance:1pf max.(any I/O to GND.)
- Protection 4 lines I/O port

**IEC Compatibility**

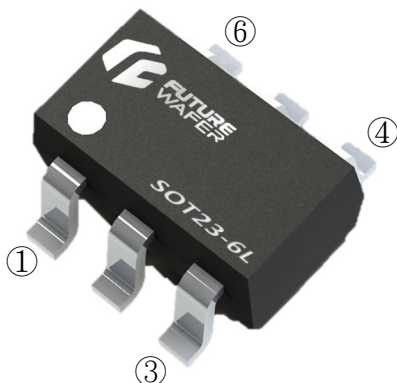
- EN61000-4
- 61000-4-2(ESD):Level 4,Contact: $\pm 8kv$ ,Air: $\pm 15kv$
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):5A,8/20us


**SOT23-6L**

**Mechanical Characteristics**

- Molded JEDEC SOT23-6L package
- Packing: Tape and Reel
- Flammability rating UL 94V-0
- Halogen Free

**Device Characteristics**

<b>Maximum Ratings@25 unless otherwise specified</b>			
Parameter	Symbol	Value	Units
Peak pulse power ( $t_p=8/20\mu s$ ) see fig 1.	$P_{PP}$	150	Watts
Operating Temperature	$T_J$	-55~150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~150	$^{\circ}C$
Peak Pulse Current( $t_p=8/20\mu s$ )	$I_{PP}$	5	A
Electrostatic Discharge	$V_{ESD}$	>8(Contact) >15(Air)	KV



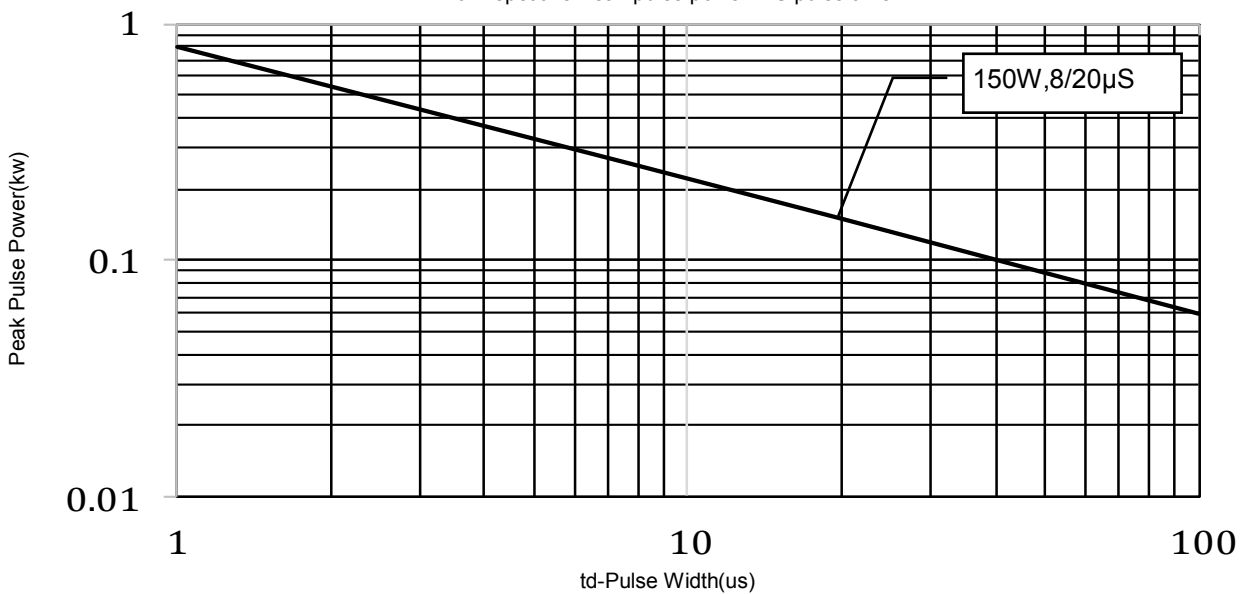
Pin	Identification
1,3,4,6	Input lines
5	Vcc IN
2	Ground

### Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	VRWM	Pin 5 to 2			5.5	V
Reverse Breakdown Voltage	VBR	I <sub>Z</sub> =1mA Pin5 to 2	6.1		9.6	V
Reverse Leakage Current	I <sub>R</sub>	Pins 1,3,4,6 to GND.			100	nA
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1mA		0.7	1.0	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A t <sub>p</sub> =8/20us Pin 5 to 2			15	V
Junction Capacitance	C <sub>I/O</sub>	Pin capacitance to GND. V <sub>dc</sub> =0V, f=1MHZ			1	pf
Junction Capacitance	C <sub>I/O-I/O</sub>	V <sub>dc</sub> =0V, f=1MHZ			0.6	pf

### Rating and characteristic curve

FIGURE 1  
Non-repetitive Peak pulse power V.S pulse time



Typical Characteristics

FIGURE 2  
Pulse Wave Form

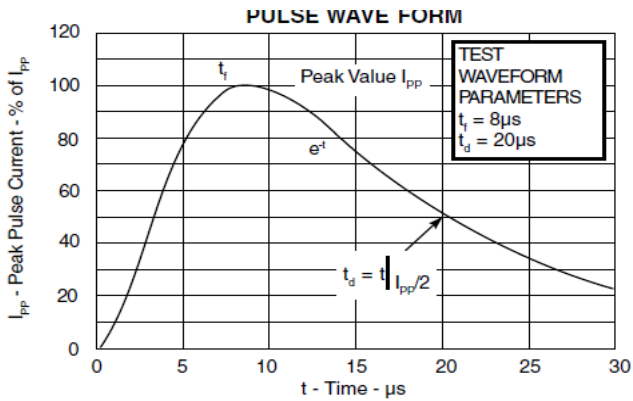


FIGURE 3  
Power Derating Curve

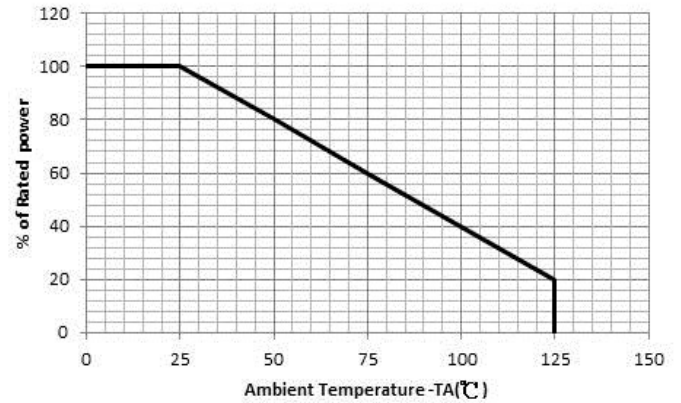


FIGURE 4  
Normalized Capacitance vs.Reverse Voltage

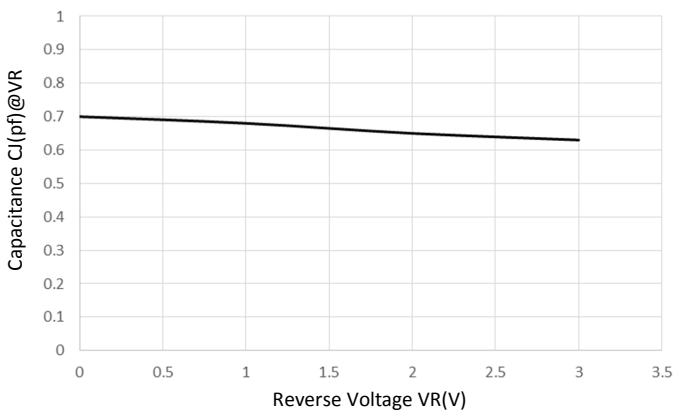


FIGURE 5  
Forward Voltage VF Map Pin5 to 2

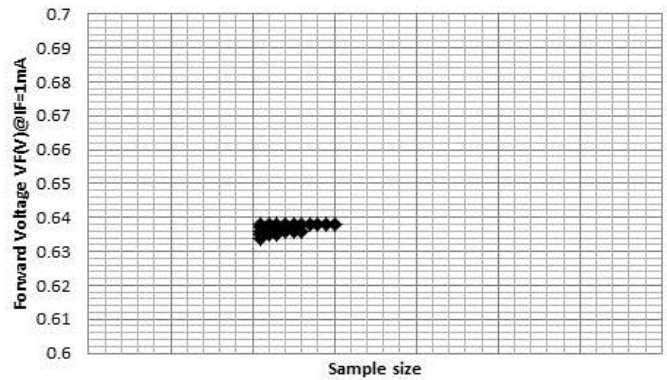
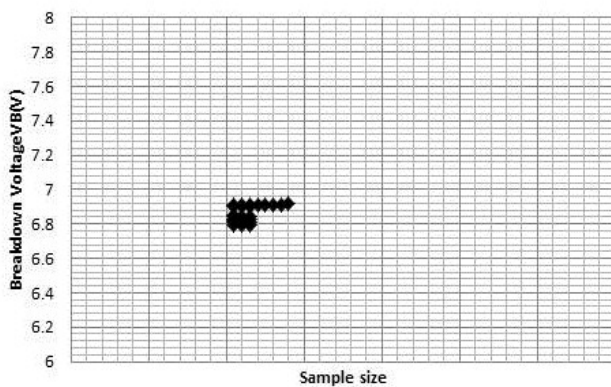
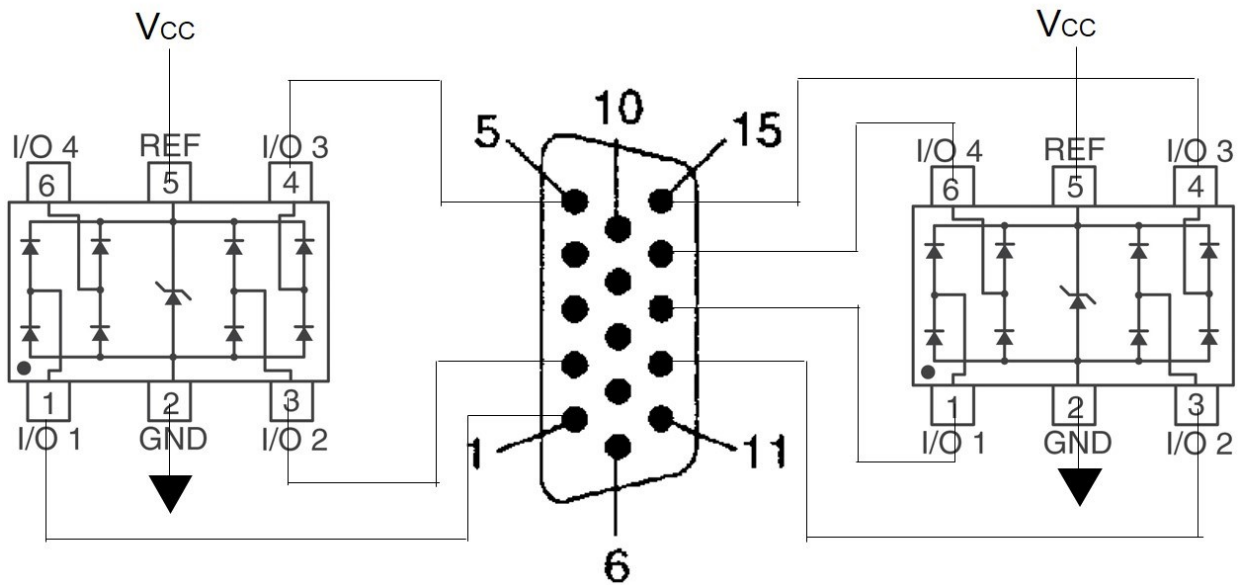
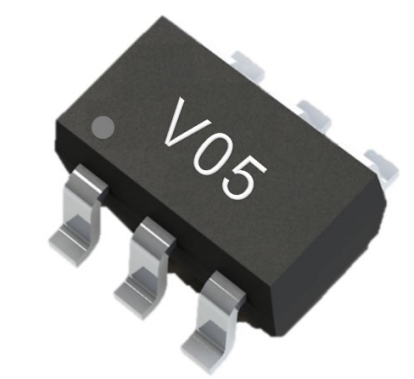
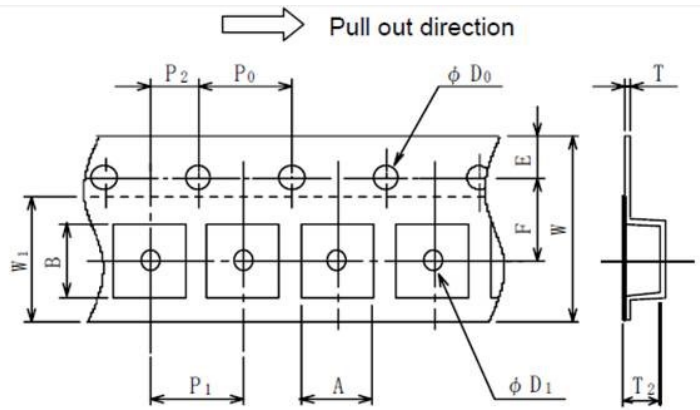


FIGURE 6  
Breakdown Voltage VB Map Pin5 to 2



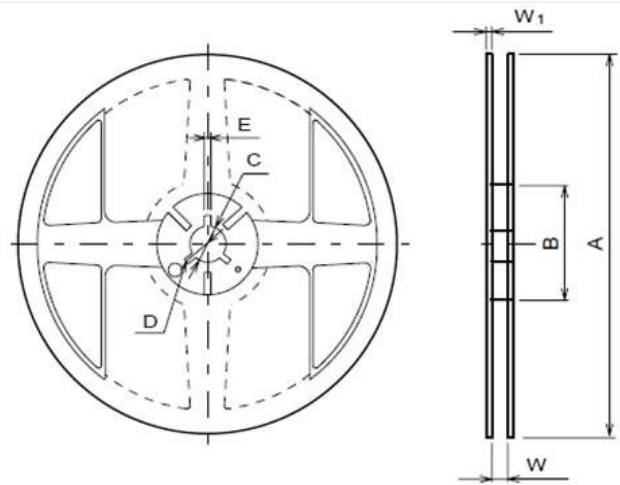
**Application information**

**Figure. 8 Video Interface Protection**
**Ordering information**
**Marking codes**


Part Number	Component Package	Quantity	Packaging Option
FESD05LVC	SOT23-6L	3,000	Tape&reel-8mm tape/7"reel

**Ultra Low Capacitance ESD array**
**Tape&Reel information**


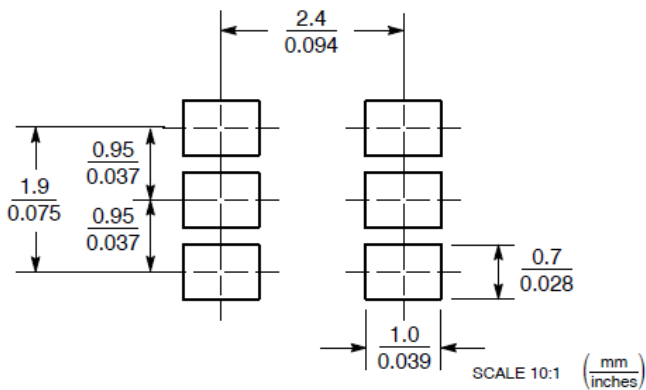
Unit:mm

A	B	D <sub>0</sub>	D <sub>1</sub>	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	T	T <sub>2</sub>	W
3.3± 0.1	3.2± 0.1	1.55	1.05	1.75±0 .1	3.5± 0.05	4.0± 0.1	4.0± 0.1	2.0± 0.05	0.25±0 .05	1.57	8.0± 0.3

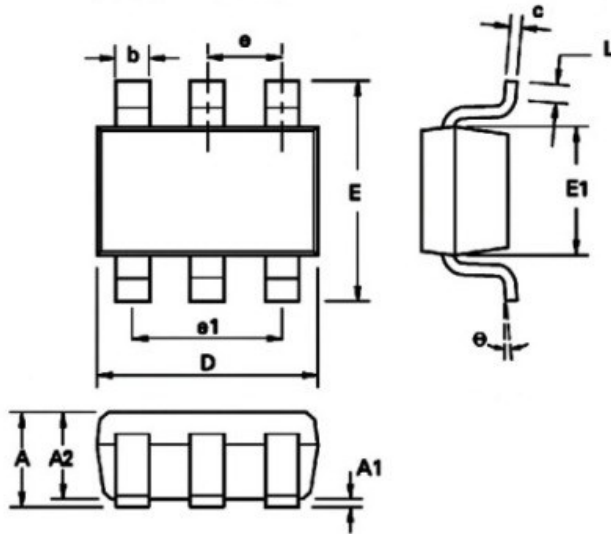


Unit:mm

A	B	C	D	E	W	W <sub>1</sub>	Contents
Ø180±1	Ø60±1	Ø13±0.2	Ø21±0.8	2±0.5	9±0.5	1.2±0.2	3,000pcs

**Pad Layout**


Package information



DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.45	0.354	0.0570
A1	0.00	0.15	0.00	0.0059
A2	0.90	1.30	0.0354	0.0511
b	0.35	0.50	0.0078	0.0196
C	0.09	0.26	0.0035	0.0102
D	2.70	3.10	0.1062	0.1220
E	2.20	3.20	0.0866	0.1181
E1	1.30	1.80	0.0511	0.0708
L	0.10	0.60	0.0039	0.0236
e	0.95 REF		0.0374 REF	
e1	1.90 REF		0.0748 REF	
L	0°	30°	0°	30°

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches



Futurewafer Technology Co., Ltd 台灣未來芯航電股份有限公司

桃園市桃園區中正路 987 巷 50 弄 2 號

Tel : +886-3-3573583/Tel : +886-3-3574065

Futurewafer.com.tw