

**ESD PROTECTION DEVICE**

STAND-OFF VOLTAGE - **5.0** Volts  
POWER DISSIPATION - **60** WATTS

**GENERAL DESCRIPTION**

The L06ESDU5V0CE2 is ultra low capacitance TVS arrays designed to protect high speed data interfaces. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

**FEATURES**

- Protects One Data or I/O Line
- Low Capacitance
- Low Clamping Voltage
- IEC 61000-4-2, Level 4
- IEC 61000-4-2 ( ESD ), > ±20KV ( Air ) ; > ±11KV ( Contact )
- Qualified to AEC-Q101 Rev. C

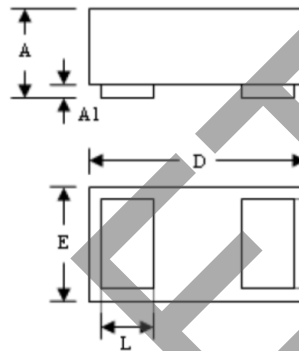
**APPLICATION**

- HDMI 1.4/2.0
- USB 2.0/3.0
- MHL
- LVDS Interfaces
- RF Antenna
- PCI Express
- eSATA Interfaces
- 6G/12G-SDI (Serial Digital Interface)

**MECHANICAL DATA**

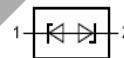
- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br.Sb, Cl)
- Component in accordance to RoHs 2011/65/EU

**SOD-882**



SOD-882		
DIM.	MIN.	MAX.
A	0.47	0.53
A1	0.00	0.05
b	0.25	0.55
D	0.95	1.075
E	0.55	0.675
L	0.20	0.45

All dimensions in millimeter



PIN ASSIGNMENT	
1	Cathode
2	Cathode

OBSOLETE – PART DISCONTINUED

**MAXIMUM RATINGS (Tj= 25°C unless otherwise noticed)**

Rating	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20us)	Ppk	60 (Max)	W
Peak Pulse Current (tp = 8/20us)	Ipp	2.5	A
Operating Junction Temperature Range	TJ	-55 to + 125	°C
Storage Temperature Range	Tstg	-55 to + 150	°C
Soldering Temperature, t max = 10s	TL	260	°C

**ELECTRICAL CHARACTERISTICS (Tj= 25°C unless otherwise noticed)**

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse standoff voltage	V <sub>RWM</sub>		---	---	5.0	V
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> = 1 mA	6.0	---		V
Reverse leakage current	I <sub>RM</sub>	V <sub>DRM</sub> = 5V	---	----	1	uA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, tp = 8/20μs			14	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 2.5A, tp = 8/20μs			25	V
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz, Between I/O pins		0.3	0.5	pF

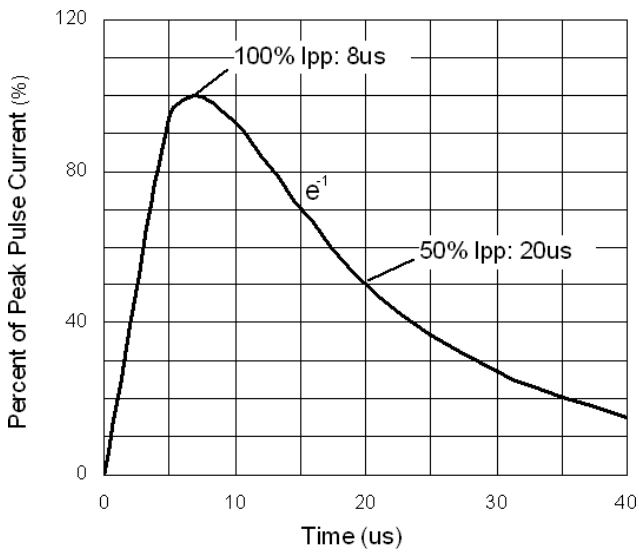


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

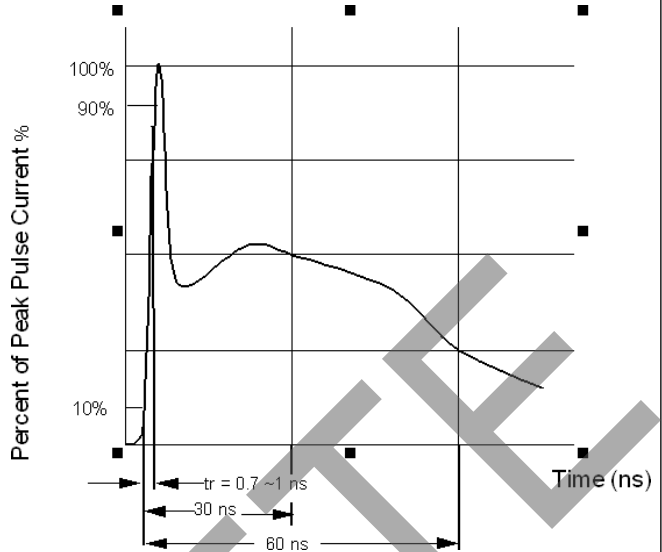


Figure 2. ESD pulse waveform according to IEC 61000-4-2

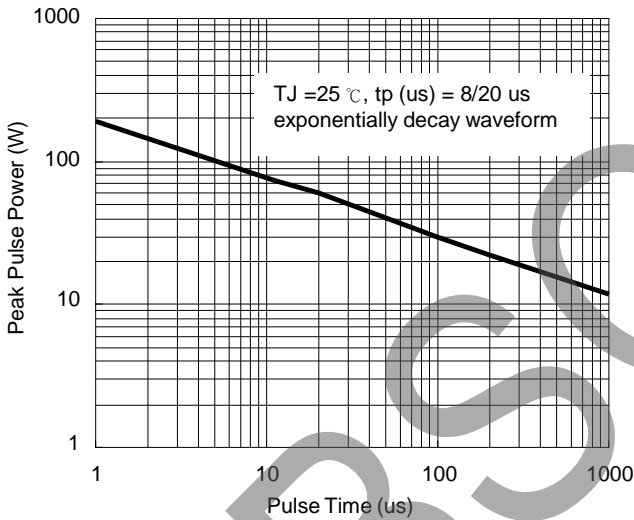


Figure 3. Power Dissipation versus Pulse Time

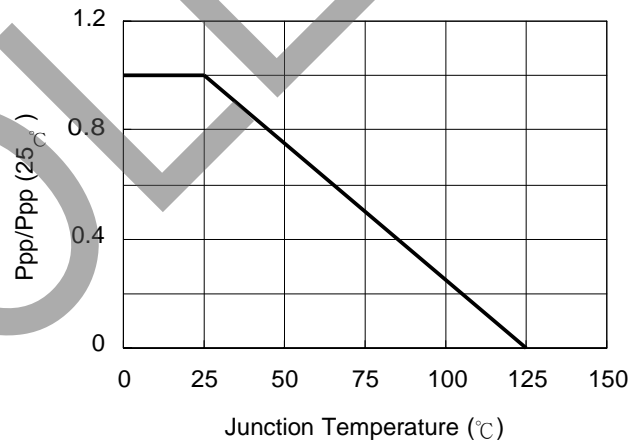


Figure 4. Peak pulse power versus TJ

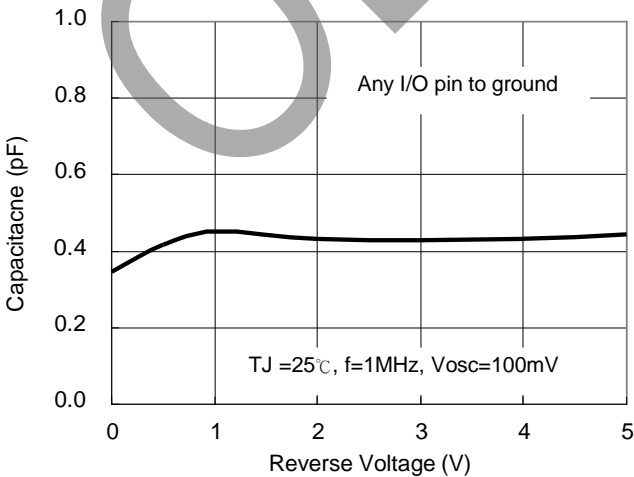


Figure 5. Typical Junction Capacitance

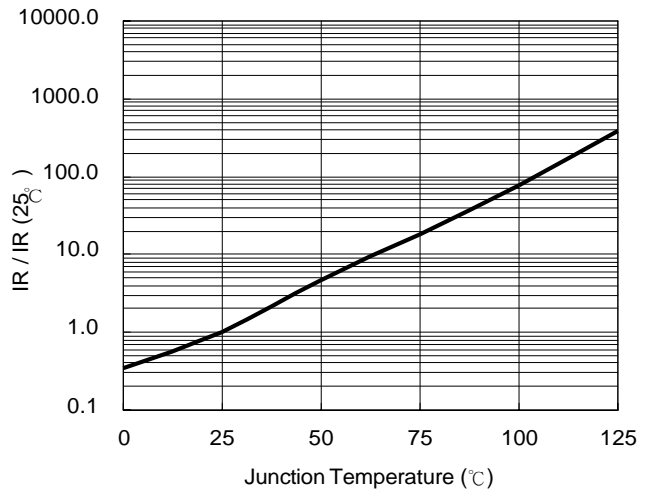


Figure 6. Reverse Leakage Current versus TJ

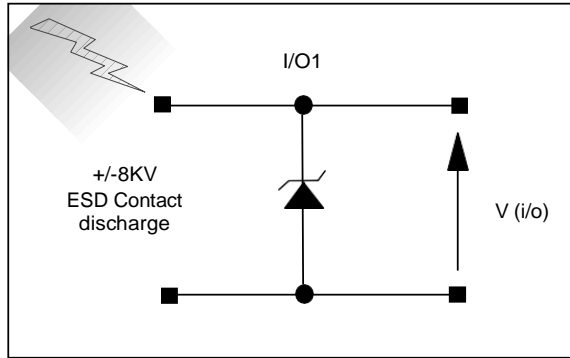


Figure 7. ESD Test Configuration

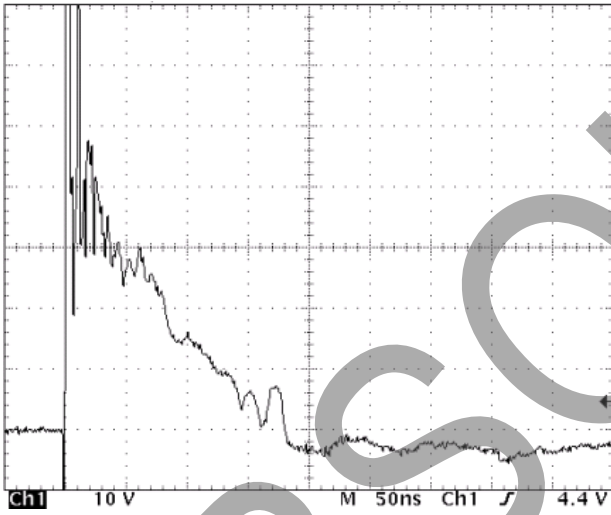


Figure 8. Clamped +8 kV ESD voltage waveform

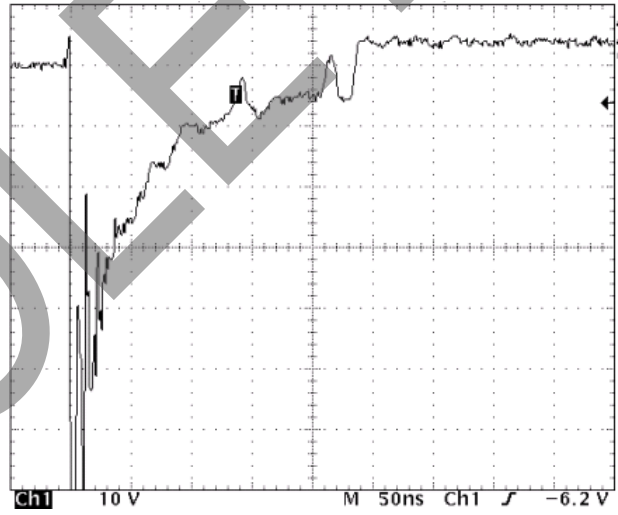


Figure 9. Clamped -8 kV ESD voltage waveform

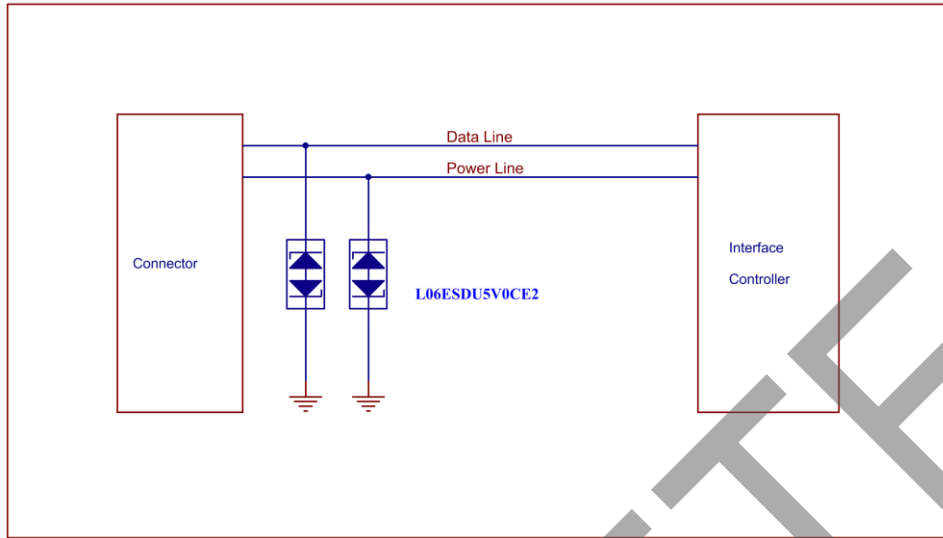


Figure 10. Cellular Handsets & Accessories ESD Protection

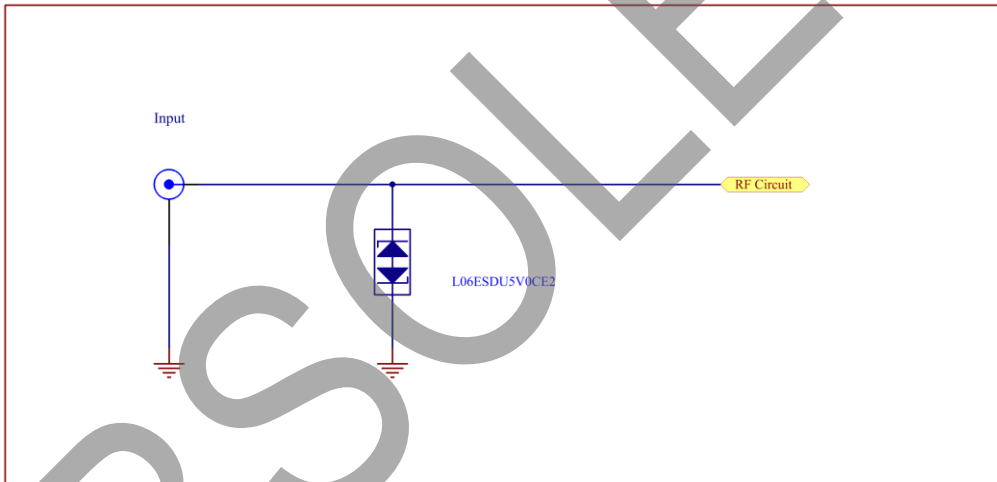


Figure 11. RF Circuit ESD Protection

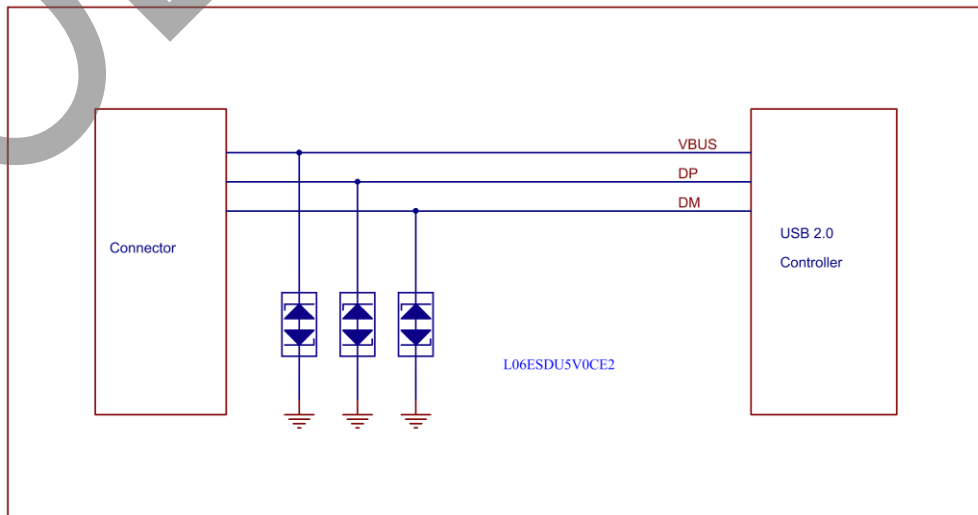


Figure 12. USB 2.0 Interface ESD Protection

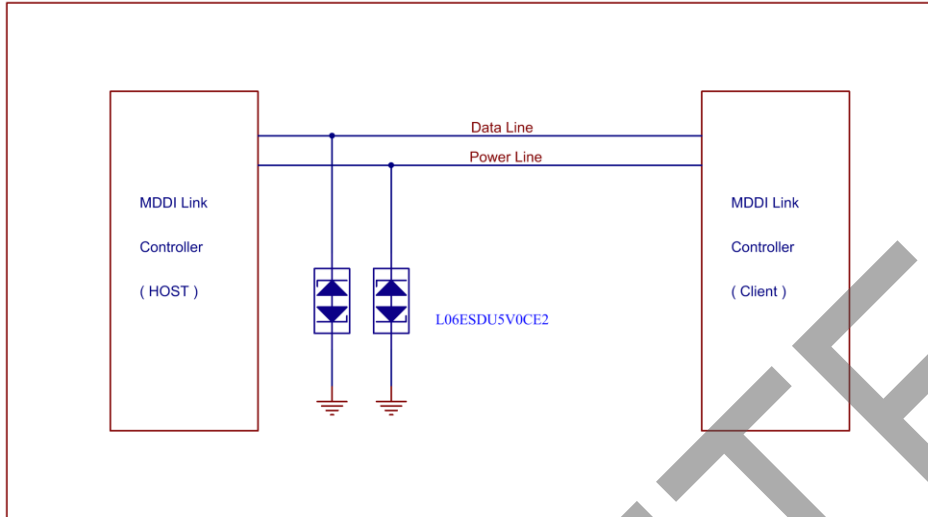
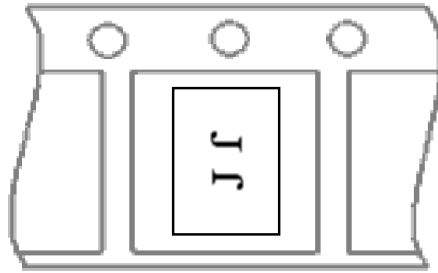


Figure 13. MDDI ESD Protection

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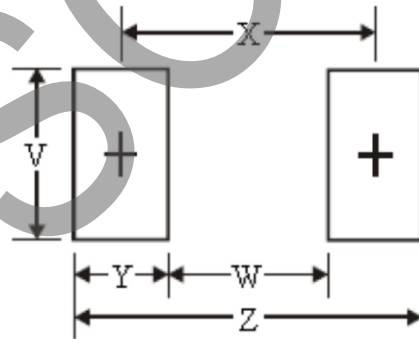
**Marking & Orientation**



**Packaging Information**

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L06ESDU5V0CE2	10K	7	150K	300K

**SOD-882 Soldering Pad Layout**



Dim.	Millimeters	Inches
Z	1.30	0.051
X	0.75	0.029
W	0.20	0.007
Y	0.55	0.021
V	0.80	0.031

## **Important Notice and Disclaimer**

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