ESD PROTECTION DEVICE

STAND-OFF VOLTAGE - **5.0** Volts
POWER DISSIPATION - **130** WATTS

FEATURES

- Protects up to four I/O lines & power line
- Low capacitance: 0.3pF typical (I/O to I/O)
- Low clamping voltage
- IEC 61000-4-2 (ESD), > ±30KV (air) ; > ±9KV (contact)

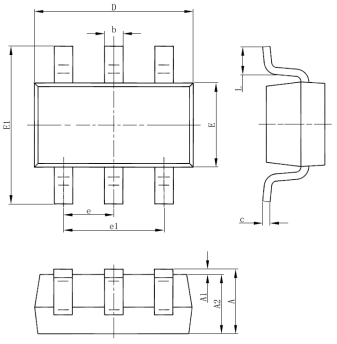
APPLICATION

- High Definition Multimedia Interface (HDMI)
- Digital Visual Interface (DVI)
- Monitors and Flat Panel Displays
- USB 2.0
- USB OTG
- IEEE 1394 Firewire Port

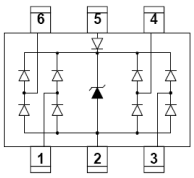
MECHANICAL DATA

- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br.Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHs 2002/95/E

SOT23-6L



SOT23-6L		
DIM.	MIN.	MAX.
A	0.90	1.45
A1	0.00	0.15
A2	0.90	1.30
b	0.30	0.50
c	0.08	0.22
D	2.45	3.00
E	1.50	1.75
E1	2.80 typ.	
e	0.95 typ.	
e1	1.90 typ.	
L	0.30	0.60
All Dimensions in millimeter		



4 lines Protection

PIN ASSIGNMENT	
1, 3, 4, 6	I/O Lines
5	V_{CC}
2	Ground

MAXIMUM RATINGS (Tj= 25℃ unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20us)	Ppk	130	W
Peak Pulse Current (tp = 8/20us)	Ipp	5	A
Operating Junction Temperature Range	TJ	-55 to + 125	℃
Storage Temperature Range	Tstg	-55 to + 150	℃
Soldering Temperature, t max = 10s	TL	260	℃

ELECTRICAL CHARACTERISTICS (Tj= 25℃ unless otherwise noticed)

Parameter	Symbol	Conditions	Mln	Typ	Max	Unit
Reverse standoff voltage	V_{RWM}	Any pin to ground	---	---	5.0	V
Breakdown voltage	VBR	IR = 1 mA	6.0	---	---	V
Reverse leakage current	IRM	V_{DRM} = 5V	---	---	1	uA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs, Any I /O pin to ground	---	---	15	V
Clamping Voltage	V_C	I_{PP} = 5A, tp = 8/20μs, Any I/O pin to ground	---	---	26	V
Junction capacitance	C_J	V_R = 2.5V, f = 1MHz, Any I/O pin to ground	---	---	0.8	pF
Junction capacitance	C_J	V_R = 2.5V, f = 1MHz, Between I/O pins	---	---	0.4	pF

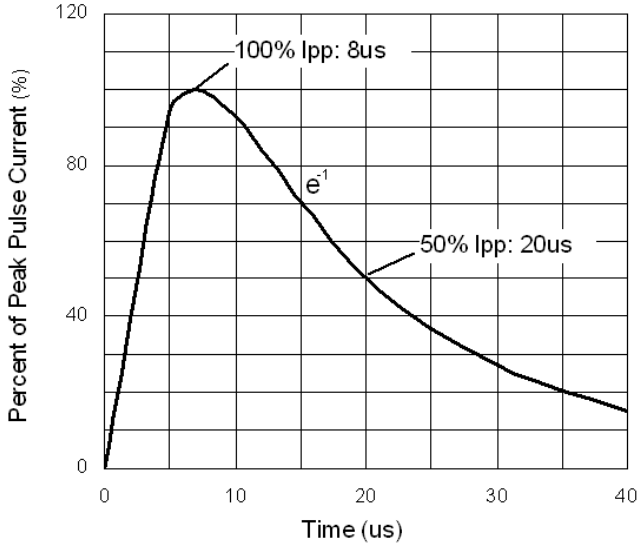


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

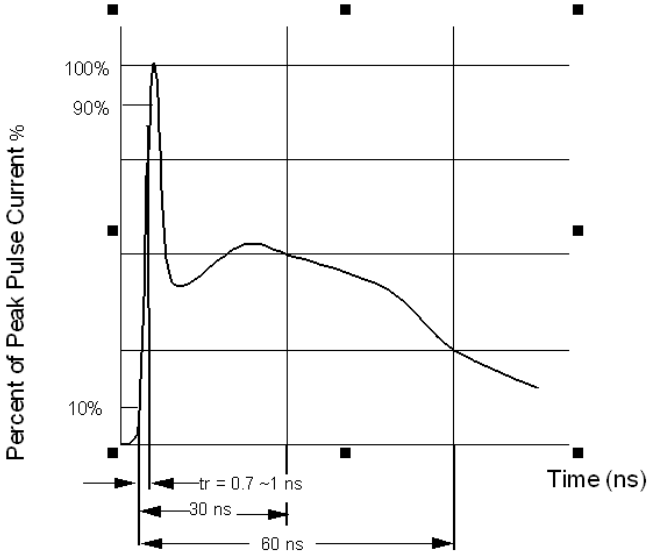


Figure 2. ESD pulse waveform according to IEC 61000-4-2

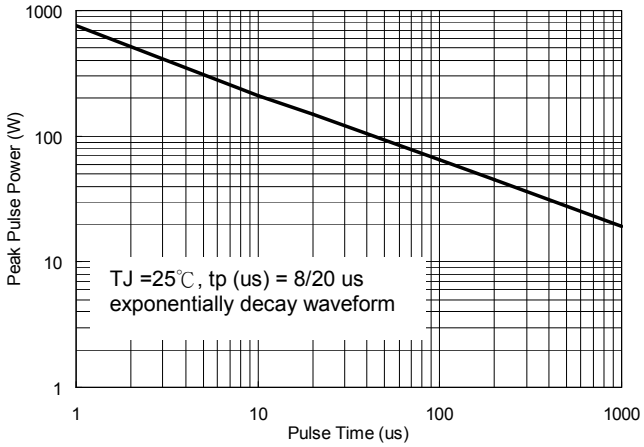


Figure 3. Power Dissipation versus Pulse Time

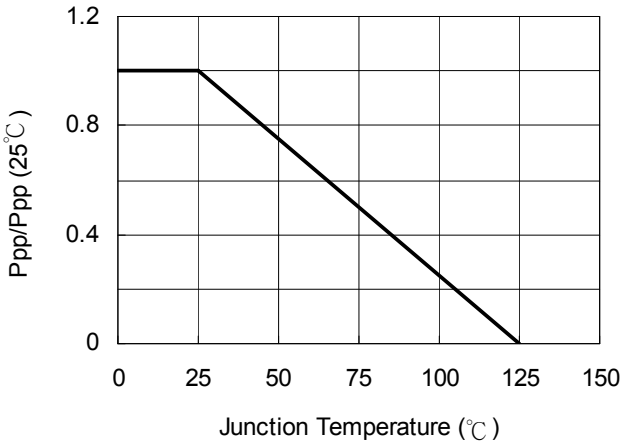


Figure 4. Peak pulse power versus TJ

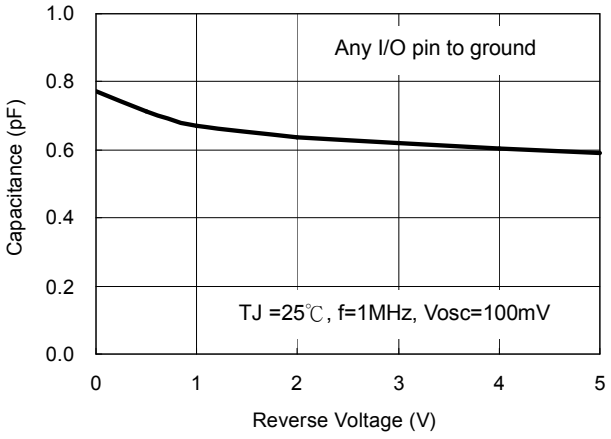


Figure 5. Typical Junction Capacitance

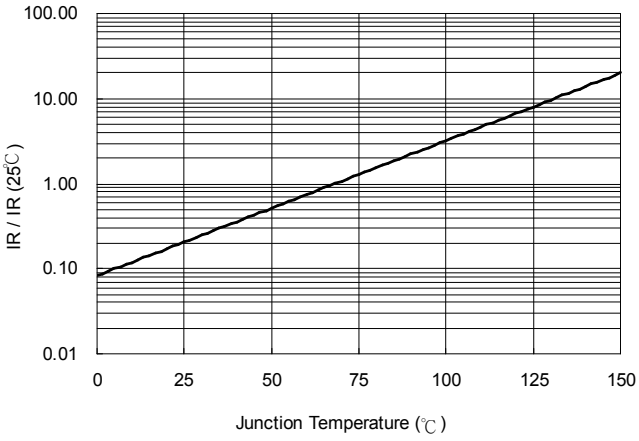


Figure 6. Reverse Leakage Current versus TJ

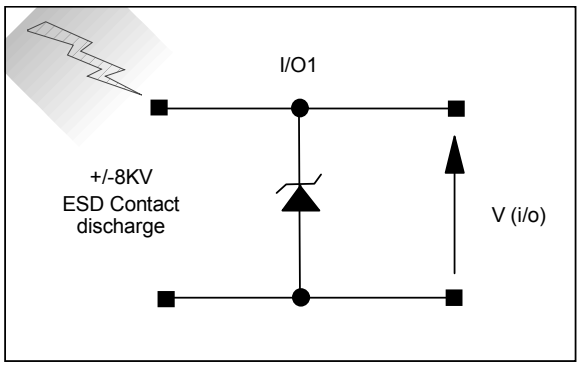


Figure 7. ESD Test Configuration

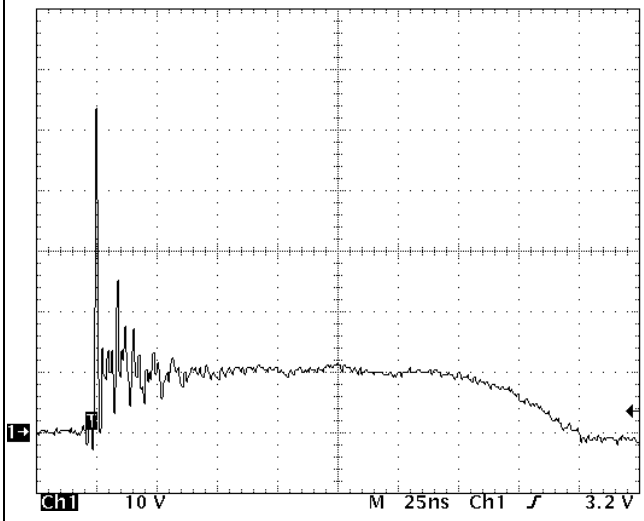


Figure 8. Clamped +8 kV ESD voltage waveform

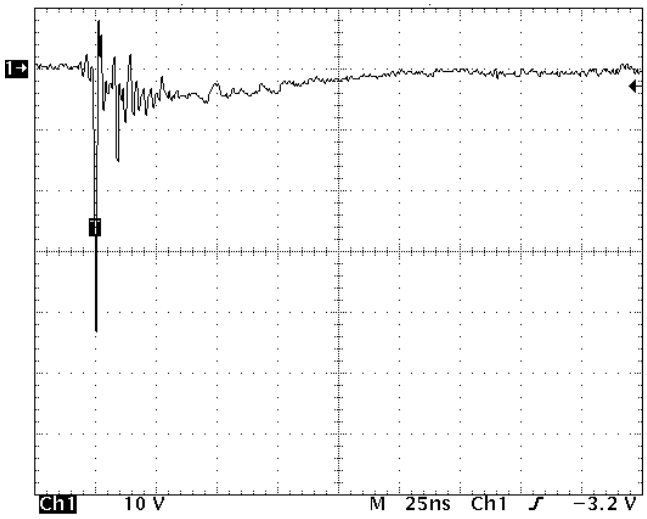
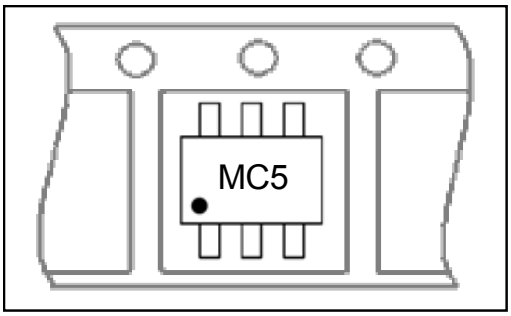
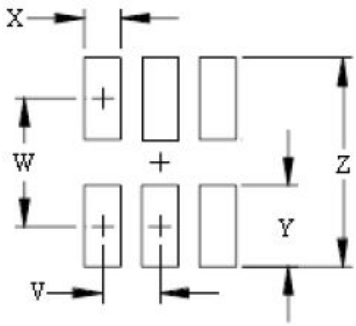


Figure 9. Clamped -8 kV ESD voltage waveform

Marking & Orientation



SOT23-6L Soldering Pad Layout



Dim.	Millimeters	Inches
Z	3.60	0.141
X	0.80	0.031
W	2.60	0.102
Y	1.00	0.039
V	0.95	0.037