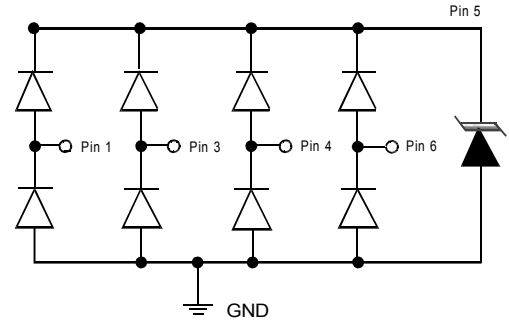


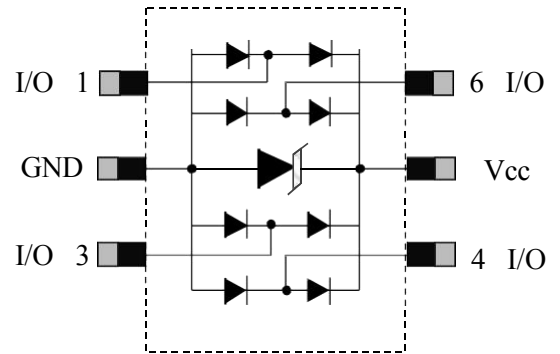
Features

- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j=0.3pF$ typ. IO to IO)
- Protection one data/power line to:
- IEC 61000-4-2 $\pm 12kV$ contact $\pm 15kV$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A(8/20 μs)



Applications

- Ethernet
- Digital Visual Interface (DVI)
- USB2.0
- Notebook and PC Computers



Absolute Maximum Rating

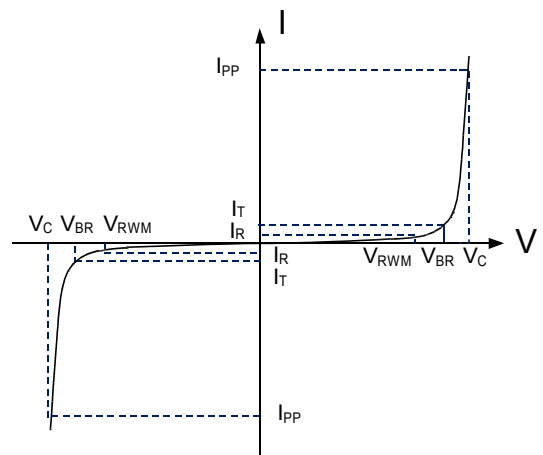
| Rating | Symbol | Value | Units |
|--|-----------|----------------|-------------|
| Peak Pulse Power ($t_p=8/20\mu s$) | P_{PP} | 60 | Watts |
| Peak Pulse Current ($t_p=8/20\mu s$)(note1) | I_{pp} | 3.5 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V_{ESD} | 15 12 | kV |
| Lead Soldering Temperature | T_L | 260(10seconds) | $^{\circ}C$ |
| Junction Temperature | T_J | -55 to + 125 | $^{\circ}C$ |
| Storage Temperature | T_{stg} | -55 to + 125 | $^{\circ}C$ |

Electrical Characteristics

| Parameter | Symbol | Conditions | Min | Typical | Max | Units |
|---------------------------|-----------|-------------------------------|-----|---------|------|-------|
| Reverse Stand-Off Voltage | V_{RWM} | | | | 5.0 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1mA$ | 6 | 7.8 | 8.5 | V |
| Reverse Leakage Current | I_R | $V_{RWM}=5V, T=25^{\circ}C$ | | 50 | 500 | nA |
| Peak Pulse Current | I_{PP} | $t_p=8/20\mu s$ | | | 3.5 | A |
| Clamping Voltage | V_C | $I_{PP}=3.5A, t_p=8/20\mu s$ | | 10 | 13 | V |
| Junction Capacitance | C_j | $V_R=0V, f=1MHz$ IO to IO | | 0.2 | 0.25 | pF |
| | | $V_R=0V, f=1MHz$ IO to GND | | 0.36 | 0.5 | |

Electrical Parameters (TA=25°C unless otherwise noted)

| Symbol | Parameter |
|-----------|---|
| I_{PP} | Maximum Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Working Peak Reverse Voltage |
| I_R | Maximum Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |



Note: 8/20μs pulse waveform.

Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

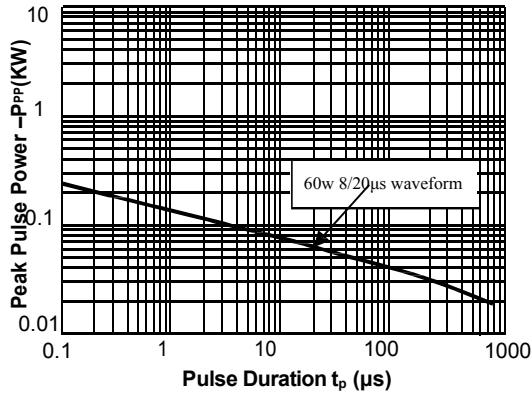


Fig.2 Pulse Derating Curve

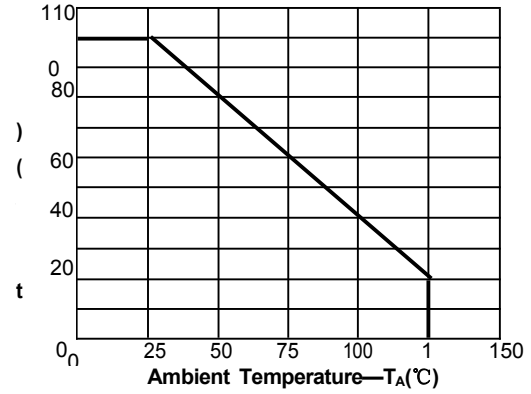


Fig.3 Pulse Waveform-8/20 μ s

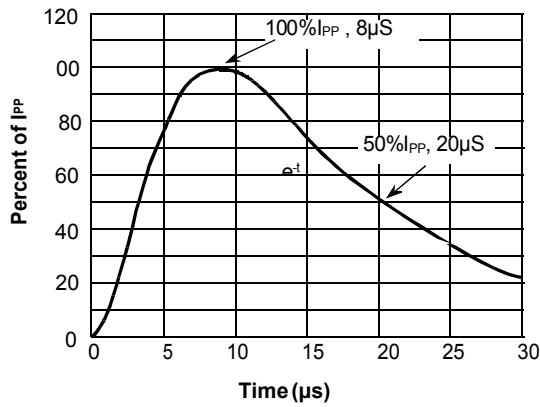


Fig.4 Pulse Waveform-ESD (IEC61000-4-2)

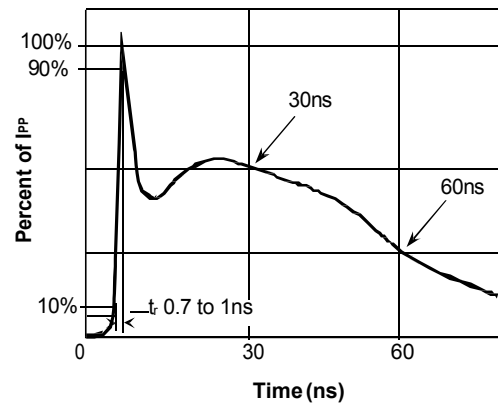
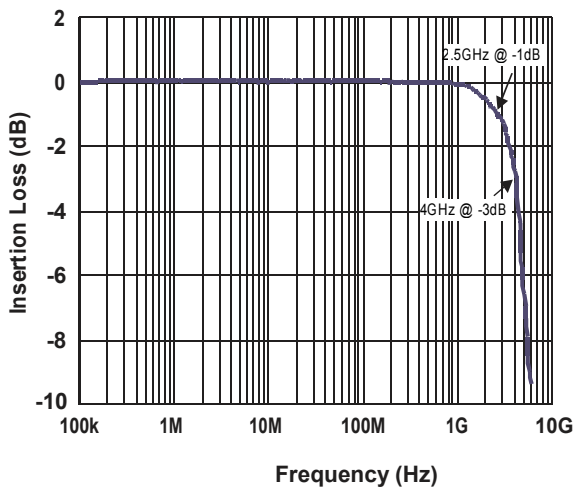
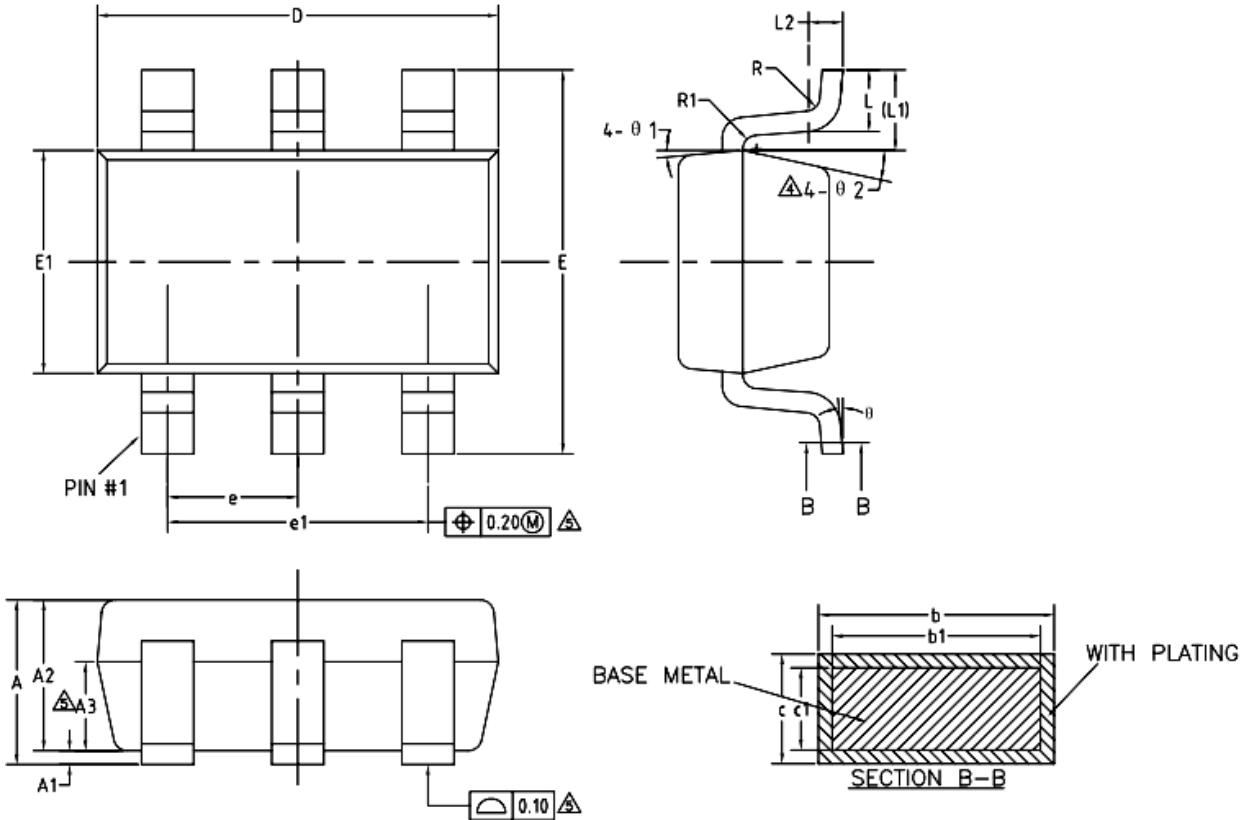


Fig.5 Insertion Loss S21 - I/O to GND



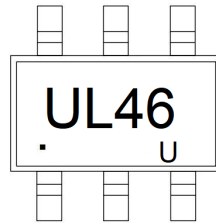
SOT23-6



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

| SYMBOL | MIN | NOM | MAX |
|---------|---------|-------|-------|
| A | — | — | 1.25 |
| A1 | 0 | — | 0.15 |
| A2 | 1.00 | 1.10 | 1.20 |
| A3 | 0.60 | 0.65 | 0.70 |
| b | 0.36 | — | 0.50 |
| b1 | 0.36 | 0.38 | 0.45 |
| c | 0.14 | — | 0.20 |
| c1 | 0.14 | 0.15 | 0.16 |
| D | 2.826 | 2.926 | 3.026 |
| E | 2.60 | 2.80 | 3.00 |
| E1 | 1.526 | 1.626 | 1.726 |
| e | 0.90 | 0.95 | 1.00 |
| e1 | 1.80 | 1.90 | 2.00 |
| L | 0.35 | 0.45 | 0.60 |
| L1 | 0.59REF | | |
| L2 | 0.25BSC | | |
| R | 0.10 | — | — |
| R1 | 0.10 | — | 0.20 |
| theta | 0° | — | 8° |
| theta 1 | 3° | 5° | 7° |
| theta 2 | 6° | — | 14° |

Marking



Ordering information

| Order code | Package | Base qty | Delivery mode |
|-----------------|---------|----------|---------------|
| UMW USBLC6-4SC6 | SOT23-6 | 3000 | Tape and reel |