

■ Features

- Uni-directional ESD protection of two lines
- 75Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Low clamping voltage
- Low leakage current
- Protecting two unidirectional lines
- IEC 61000-4-2 $\pm 12kV$ contact $\pm 17kV$ air
- IEC 61000-4-5 (Lightning) 4.5A ($8/20\mu s$)

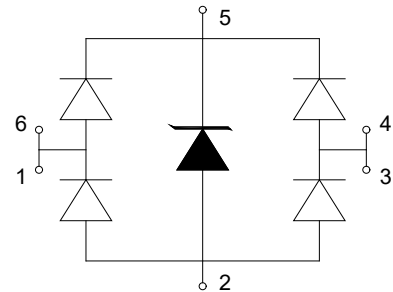
■ Applications

- Portable electronics
- USB 2.0 and USB 3.0
- HDMI 1.3 and HDMI 1.4
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Notebooks

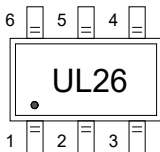
■ Mechanical Data

- Package: SOT-23-6L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

■ Schematic & PIN Configuration



■ Ordering Information

| Part Number | Package | Marking | Packing | Reel Size |
|-------------|-----------|---|------------------|-----------|
| USBLC6-2SC6 | SOT-23-6L |  | 3000 Tape & Reel | 7 inches |

■ Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

| Parameters | Symbol | Min | Max | Unit |
|--|-----------|-----|----------|--------------------|
| Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C | P_{pk} | - | 75 | W |
| Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C | I_{PP} | | 4.5 | A |
| ESD (IEC61000-4-2 air discharge) @ 25°C | V_{ESD} | - | ± 17 | kV |
| ESD (IEC61000-4-2 contact discharge) @ 25°C | V_{ESD} | - | ± 12 | kV |
| Junction temperature | T_J | - | 125 | $^{\circ}\text{C}$ |
| Operating temperature | T_{OP} | -40 | 85 | $^{\circ}\text{C}$ |
| Storage temperature | T_{STG} | -55 | 150 | $^{\circ}\text{C}$ |
| Lead temperature | T_L | - | 260 | $^{\circ}\text{C}$ |

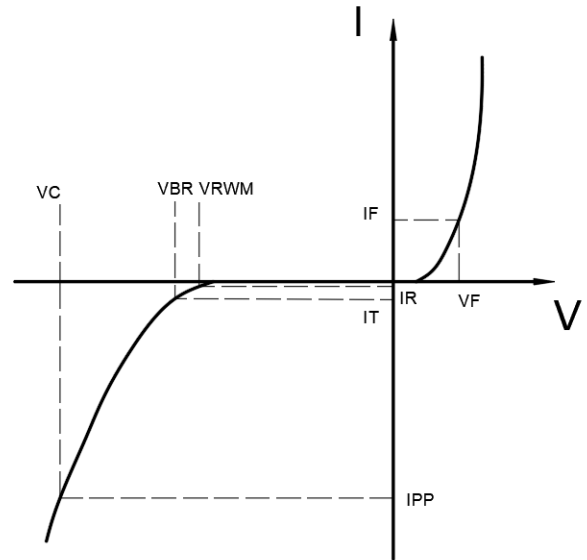
■ Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

| Parameter | Symbol | Conditions | Min | Typ | Max | Units |
|---------------------------|-----------|---|-----|-----|-----|---------------|
| Reverse Stand-off Voltage | V_{RWM} | | | | 5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1\text{mA}$ | 6 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=5\text{V}$ | | | 1 | μA |
| Clamping Voltage | V_C | $I_{PP}=1\text{A}; t_p=8/20\mu\text{s}$ | | 10 | | V |
| Clamping Voltage | V_C | $I_{PP}=4.5\text{A}; t_p=8/20\mu\text{s}$ | | 15 | | V |
| Junction Capacitance | C_J | $V_R=0\text{V}; f=1\text{MHz}$ | | 0.8 | | pF |

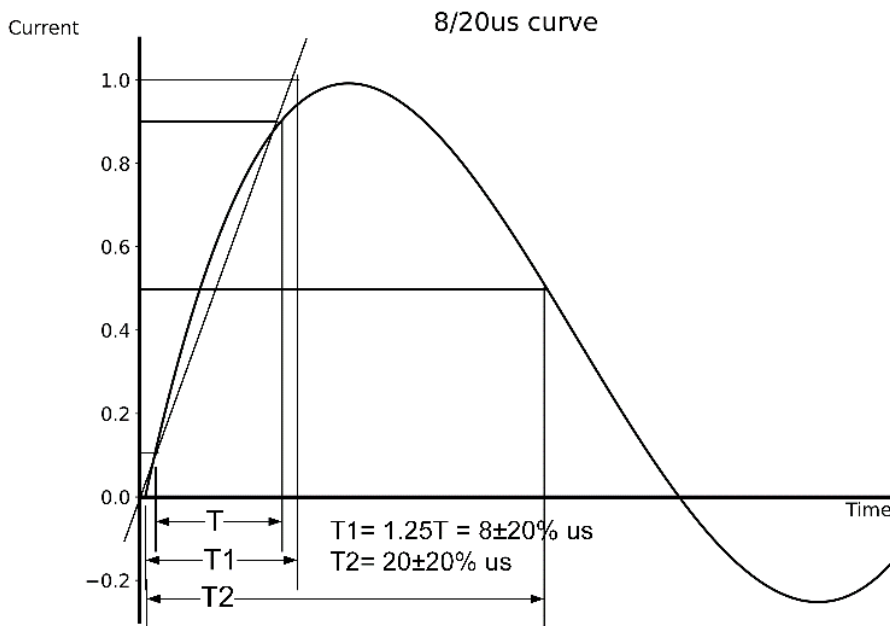


■ Electrical Parameters($T_A=25^\circ\text{C}$ unless otherwise Specified)

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

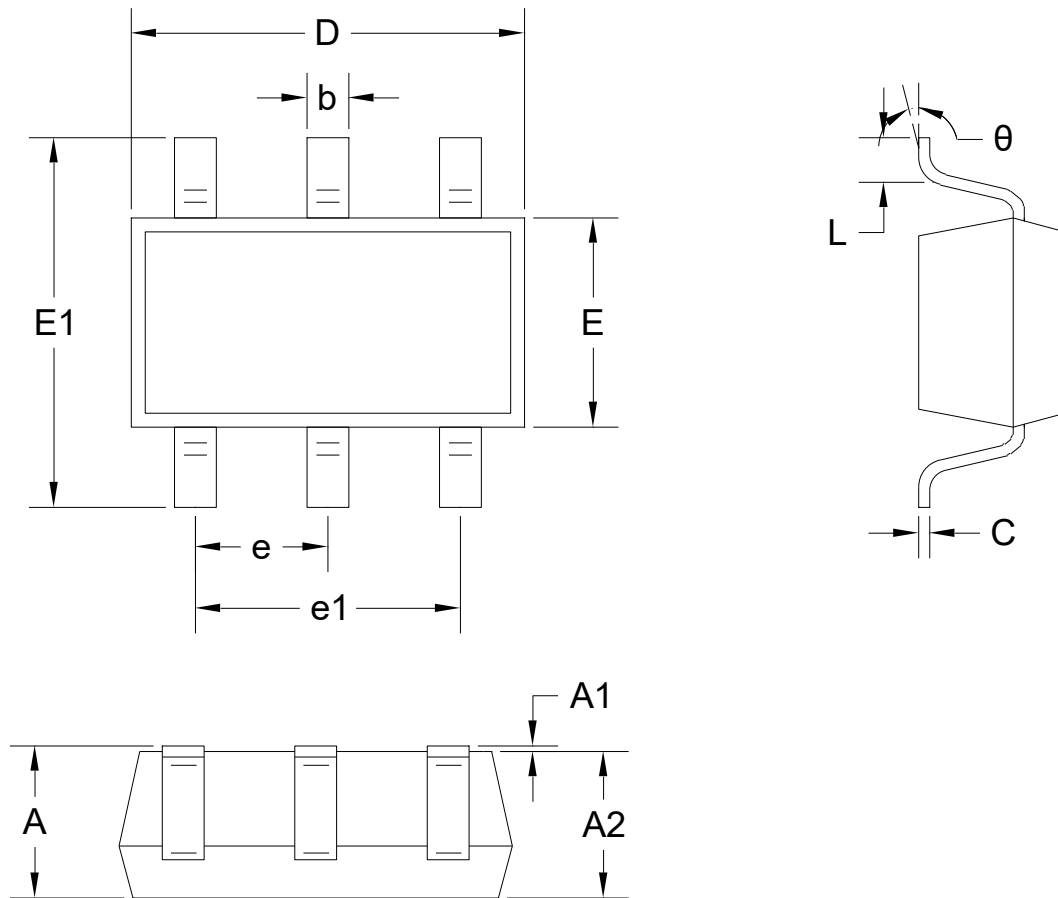


■ Typical Characteristics($T_A=25^\circ\text{C}$ unless otherwise Specified)





■ Outline Drawing – SOT-23-6L



Unit: mm

| Symbol | | A | A1 | A2 | b | c | D |
|--------|-----|-------|-------|----------|-------|-------|-------|
| Spec | Min | 1.050 | 0.000 | 1.050 | 0.300 | 0.100 | 2.820 |
| | Max | 1.250 | 0.100 | 1.150 | 0.500 | 0.200 | 3.020 |
| Symbol | | E | E1 | e | e1 | L | θ |
| Spec | Min | 1.500 | 2.650 | 0.950BSC | 1.800 | 0.300 | 0° |
| | Max | 1.700 | 2.950 | | 2.000 | 0.600 | 8° |

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