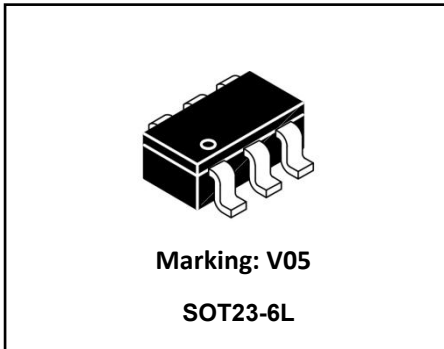
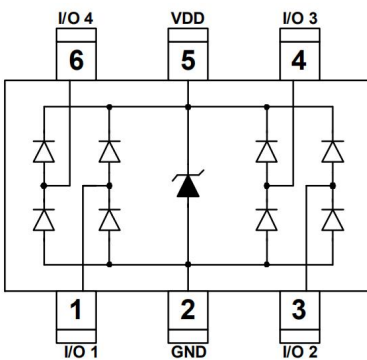


## 4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY



### Features

- Protects 4 I/O Lines
- Low Working Voltage: 5 V
- Low Clamping Voltage
- Low Capacitance: 0.6pF (I/O to GND)
- Response time is typically < 1 ns
- IEC61000-4-2 (ESD) ±20 kV (air), ±15 kV (contact)
- IEC61000-4-5 (Surge) 4 A (I/O to GND)
- IEC61000-4-5 (Surge) 17 A (VDD to GND)
- RoHS compliant



**Pin Configuration**

### Applications

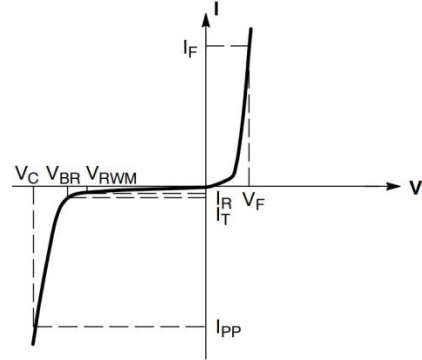
- USB 3.0
- HDMI 1.3
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Portable Electronics
- Notebooks

### Absolute maximum ratings

| Parameter                                       | Symbol    | Rating     | Unit |
|---|-----------|------------|------|
| Peak pulse power ( $t_p = 8/20\mu s$ )          | $P_{pk}$  | 84         | W    |
| Peak pulse current ( $t_p = 8/20\mu s$ )        | $I_{pp}$  | 6          | A    |
| ESD according to IEC61000-4-2 air discharge     | $V_{ESD}$ | ±20        | kV   |
| ESD according to IEC61000-4-2 contact discharge |           | ±15        |      |
| Junction temperature                            | $T_J$     | 125        | °C   |
| Operation temperature                           | $T_{OP}$  | -40 to 85  | °C   |
| Storage temperature                             | $T_{STG}$ | -55 to 150 | °C   |
| Lead temperature                                | $T_L$     | 260        | °C   |

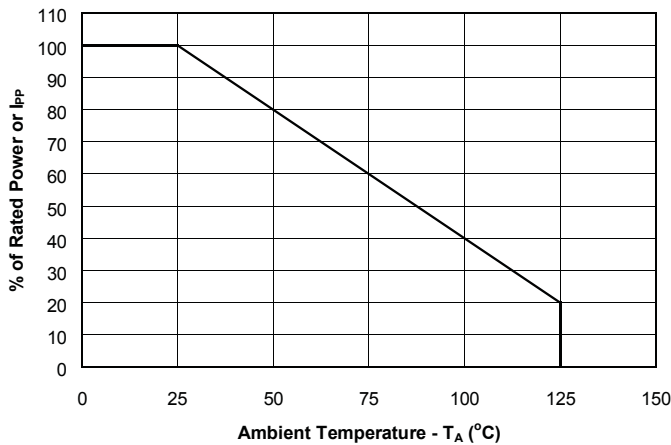
Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)

| 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                                   |
| $I_F$     | Forward Current                                |
| $V_F$     | Forward Voltage @ $I_F$                        |
| $P_{pk}$  | Peak Power Dissipation                         |
| C         | Max. Capacitance @ $V_R = 0$ and $f = 1.0$ MHz |

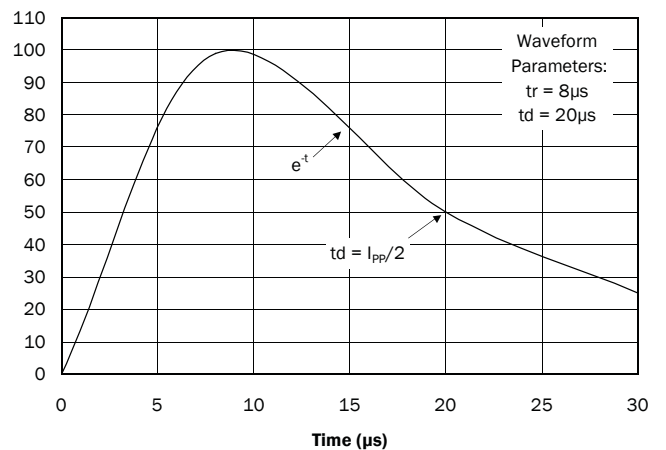


Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)

| Parameter                         | Symbol    | Min | Typ | Max | Unit | Test Condition                           |
|-----------------------------------|-----------|-----|-----|-----|------|--|
| Reverse Working Voltage           | $V_{RWM}$ | --  | --  | 5   | V    |  |
| Breakdown Voltage                 | $V_{BR}$  | 6.5 | --  | 8.5 | V    | $I_T=1\text{mA}$                         |
| Leakage Current $I_{Leak}$        | $I_R$     | --  | --  | 100 | nA   | $V_{RWM}=5\text{V}$                      |
| Clamping Voltage (I/O-GND)        | $V_C$     | --  | --  | 13  | V    | $I_{PP}=4\text{A}, T_p=8/20\mu\text{s}$  |
| Clamping Voltage ( $V_{DD}$ -GND) | $V_C$     | --  | --  | 19  | V    | $I_{PP}=17\text{A}, T_p=8/20\mu\text{s}$ |
| Junction Capacitance (I/O to GND) | $C_J$     | --  | 0.6 | 0.7 | pF   | $V_R=0\text{V}, f=1\text{MHz}$           |
| Junction Capacitance (I/O to I/O) | $C_J$     | --  | 0.3 | 0.4 | pF   | $V_R=0\text{V}, f=1\text{MHz}$           |

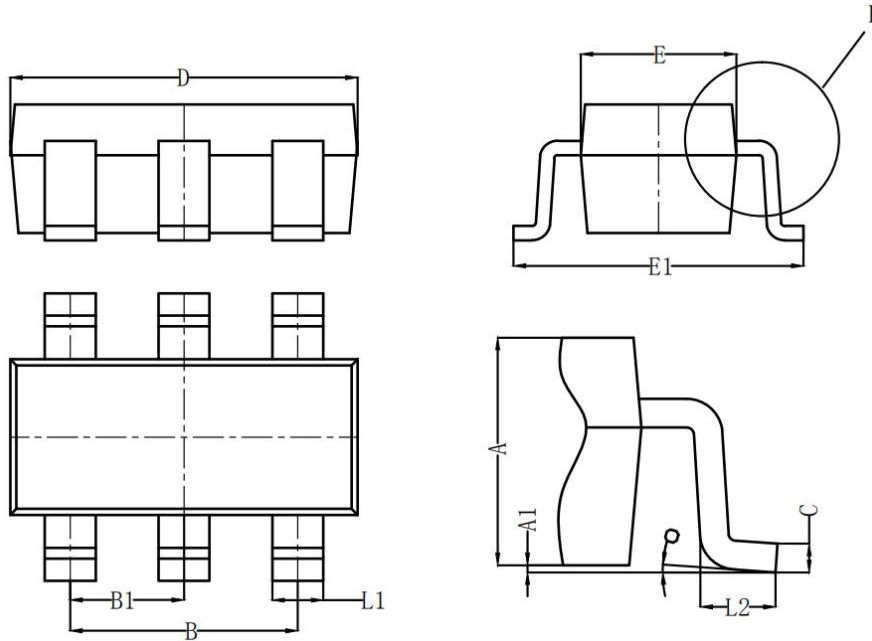


Power Derating Curve



Pulse Waveform

SOT23-6L Package outline



| Symbol | Dimensions (mm) |       |       |
|--------|-----------------|-------|-------|
|        | Min             | Typ   | Max   |
| A      | 1.050           | 1.100 | 1.150 |
| A1     | 0.000           | 0.050 | 0.100 |
| L1     | 0.300           | 0.400 | 0.500 |
| C      | 0.100           | 0.150 | 0.200 |
| D      | 2.820           | 2.920 | 3.020 |
| E      | 1.500           | 1.600 | 1.700 |
| E1     | 2.650           | 2.800 | 2.950 |
| B      | 1.800           | 1.900 | 2.000 |
| B1     | 0.950 Typ       |       |       |
| L2     | 0.300           | 0.450 | 0.600 |
| O      | 0°              | 4°    | 8°    |