

Features

- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 5V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ ROHS Compliant

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|--------------|--------------|-----------|
| ESDA6V1W5-TP | 3000 | 7" |

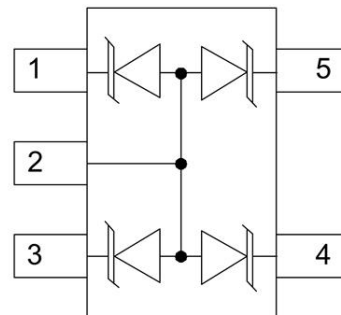
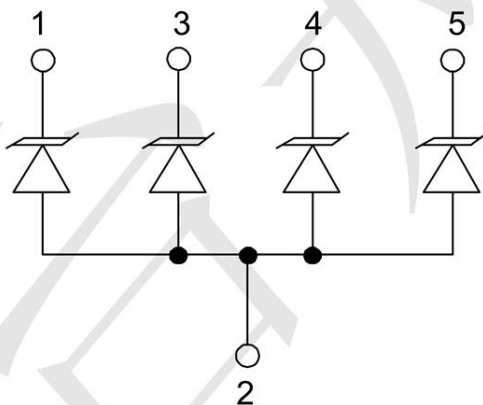
Mechanical Characteristics

- ◆ Package: SOT353(SC70-5)
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Shipping Qty : 3000pcs/7InchTape & Reel

Applications

- ◆ Cell phone Handsets and Accessories
- ◆ Microprocessor Based Equipment
- ◆ Personal Digital Assistants (PDA's) and Pagers
- ◆ Desktops PC and Servers
- ◆ Notebook, Laptop, and Palmtop Computers
- ◆ Portable Instrumentation
- ◆ Peripherals

Dimensions and Pin Configuration



marking: E61

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20μs) (Vcc-GND) | P _{pk} | 150 | W |
| ESD per IEC61000-4-2 (Air) | V _{ESD} | ±30 | kV |
| ESD per IEC61000-4-2 (Contact) | | ±30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|---------------------------------------|-------------------|-----|-----|-----|------|---|
| Reverse Working Voltage | V _{RWM} | | | 5 | V | |
| Breakdown Voltage | V _{BR} | 6 | | 9 | V | I _T =1mA |
| Leakage Current | I _{Leak} | | | 100 | nA | V _{RWM} =5V |
| Clamping Voltage | V _C | | | 11 | V | I _{PP} =4.5A, T _p =8/20μs |
| Clamping Voltage | V _C | | | 14 | V | I _{PP} =10A, T _p =8/20μs |
| Junction Capacitance (I/O to GND) | C _J | | 60 | 90 | pF | V _R =0V, f=1MHz, |
| Junction Capacitance (I/O to I/O) | C _J | | 30 | | pF | V _R =0V, f=1MHz, |

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

Fig1. 8/20 μs Pulse Waveform

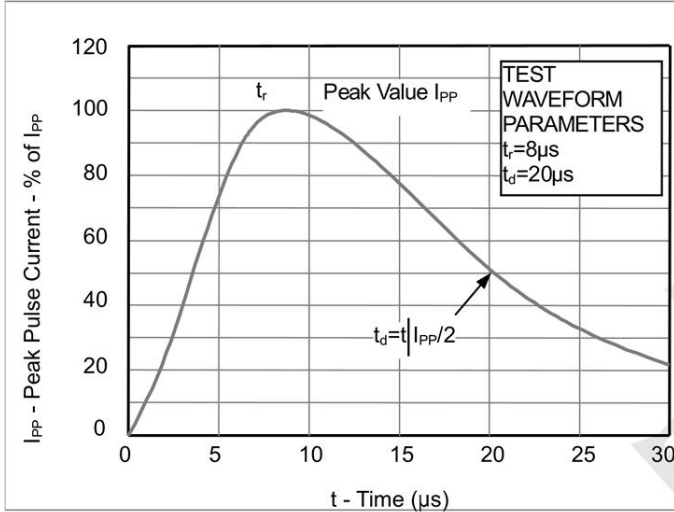


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

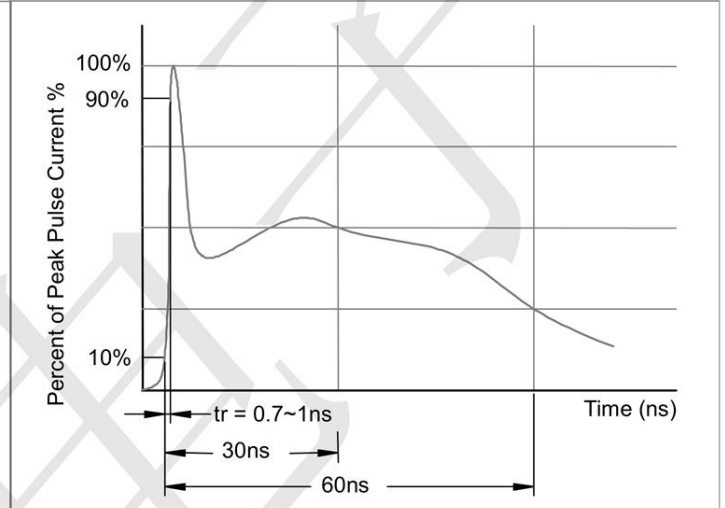
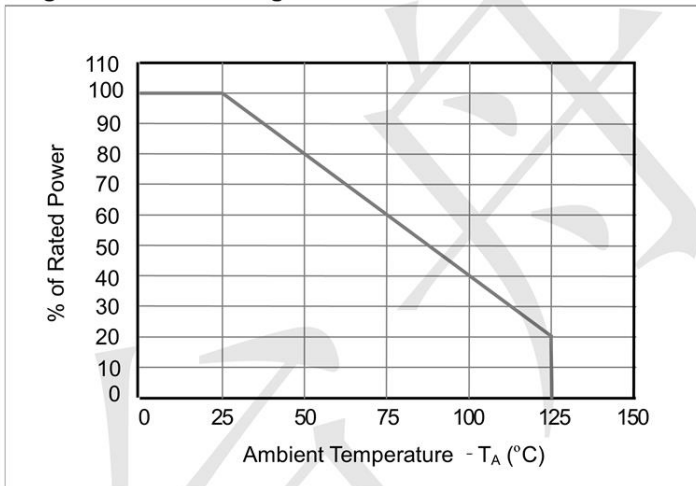
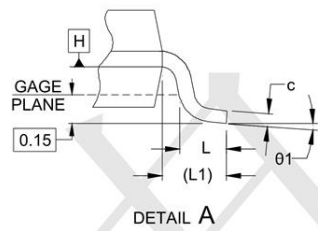
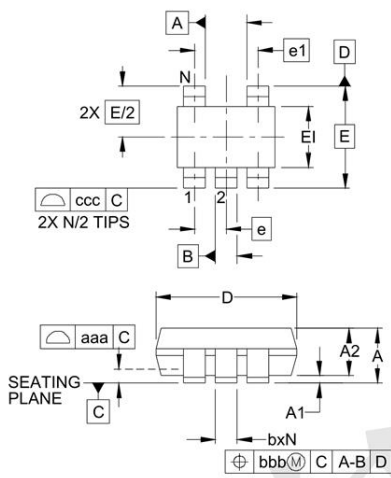


Fig3. Power Derating Curve



Outline Drawing - SOT-353



| DIM | INCHES | | | MILLIMETERS | | |
|-----|----------|------|------|-------------|------|------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | - | - | .043 | - | - | 1.10 |
| A1 | .000 | - | .004 | 0.00 | - | 0.10 |
| A2 | .028 | .035 | .039 | 0.70 | 0.90 | 1.00 |
| b | .006 | - | .012 | 0.15 | - | 0.30 |
| c | .003 | - | .009 | 0.08 | - | 0.22 |
| D | .075 | .079 | .083 | 1.90 | 2.00 | 2.10 |
| E1 | .045 | .049 | .053 | 1.15 | 1.25 | 1.35 |
| E | .083 BSC | | | 2.10 BSC | | |
| e | .026 BSC | | | 0.65 BSC | | |
| e1 | .051 | | | 1.30 BSC | | |
| L | .010 | .014 | .018 | 0.26 | 0.36 | 0.46 |
| L1 | (.017) | | | (0.42) | | |
| N | 5 | | | 5 | | |
| θ1 | 0° | - | 8° | 0° | - | 8° |
| aaa | .004 | | | 0.10 | | |
| bbb | .004 | | | 0.10 | | |
| ccc | .012 | | | 0.30 | | |

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