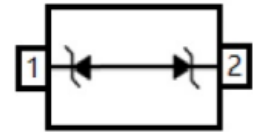


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- 450 Watts peak pulse power ($t_p = 8/20\mu s$)
- Low clamping voltage
- Working voltage: $V_{RWM} = 5V$
- Low reverse clamping voltage

HF



SOD-523

Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

| Part Number | Package | Shipping Quantity | Marking Code |
|-------------|---------|------------------------|--------------|
| PSD05BX | SOD-523 | 3000 pcs / Tape & Reel | P5B |

Maximum Ratings (@ $T_A = 25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-------------|----------|------|
| IEC 61000-4-2; ESD (Air) | V_{ESD-A} | ± 30 | kV |
| IEC 61000-4-2; ESD (Contact) | V_{ESD-C} | ± 30 | kV |
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 450 | W |
| Peak Pulse Current ($t_p = 8/20\mu s$) | I_{PP} | 30 | A |

Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|----------------------------|-----------|------------|------------|
| Junction Temperature Range | T_J | -55 ~ +125 | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -55 ~ +150 | $^\circ C$ |

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

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------------|------------|--|------|------|------|---------------|
| Reverse Stand-off Voltage | V_{RWM} | | - | - | 5 | V |
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_T = 1\text{mA}$ | 6 | - | 8 | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5\text{V}$ | - | - | 1 | μA |
| Clamping Voltage | V_C | $I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$ | - | - | 8 | V |
| | | $I_{PP} = 30\text{A}, t_p = 8/20\mu\text{s}$ | - | - | 15 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}, f = 1\text{MHz}$ | - | 55 | 75 | pF |

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

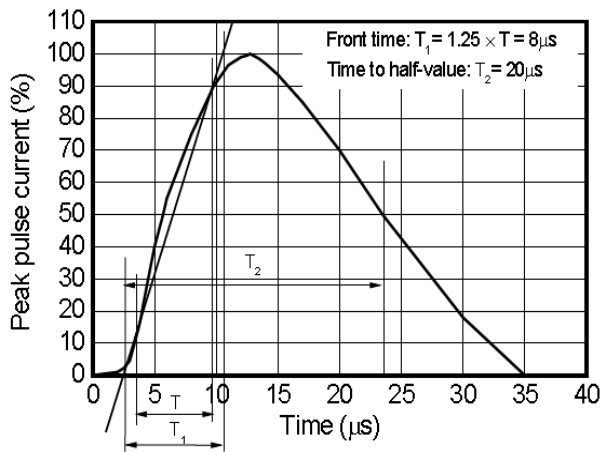


Fig 1 8/20 μs waveform per IEC61000-4-5

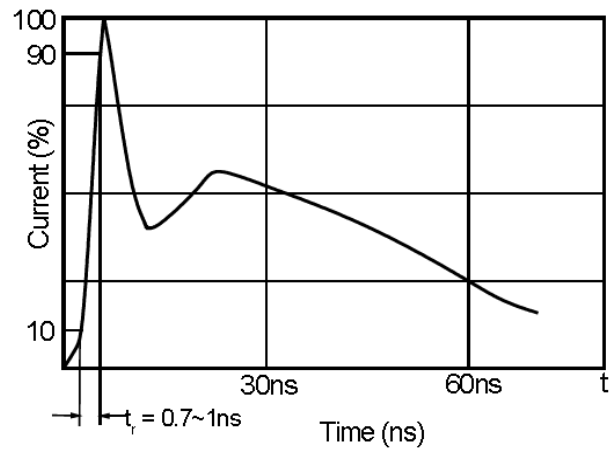


Fig 2 ESD pulse waveform according to IEC61000-4-2

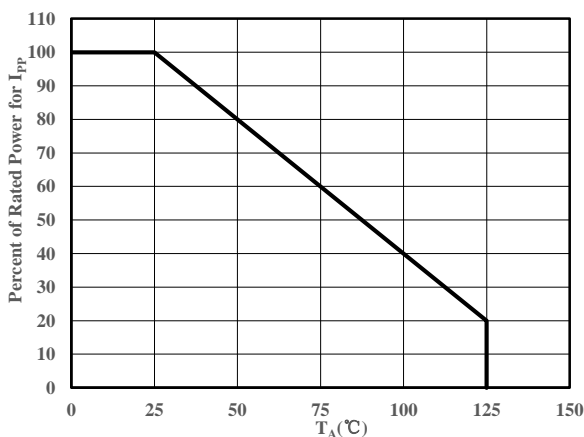
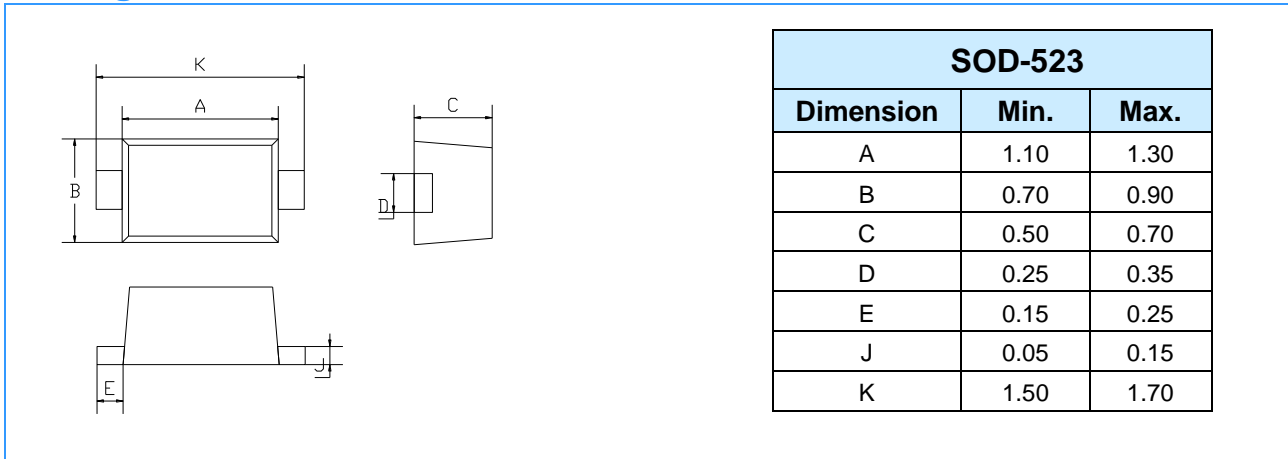
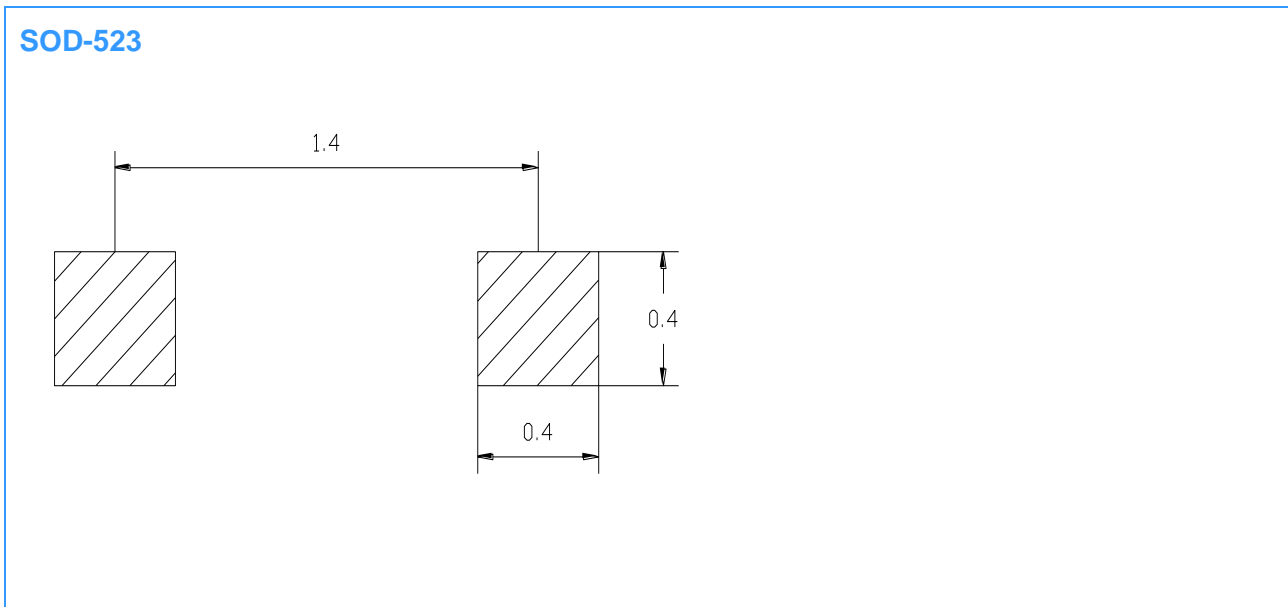


Fig 3 Power Derating Curve

Package Outline Dimensions (Unit: mm)



Package Outline Dimensions (Unit: mm)



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