

FEATURES

- | 150W Peak Pulse Power per Line(tp=8/20us)
- | Protects one bi-directional I/O line
- | Low clamping voltage
- | Working voltages : 36 V
- | Low leakage current

APPLICATIONS

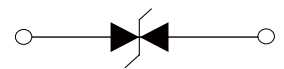
- | LED light bar
- | Cell phone handsets and accessories
- | Microprocessor based equipment
- | Personal digital assistants (PDA' s)
- | Notebooks, desktops, and servers
- | Portable instrumentation
- | Peripherals
- | Digital cameras



SOD-523



Marking



Schematic Symbol

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

| | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |

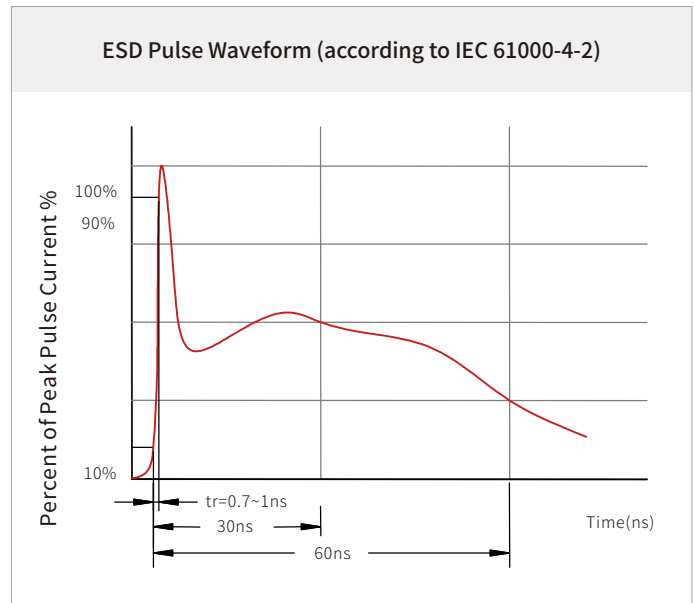
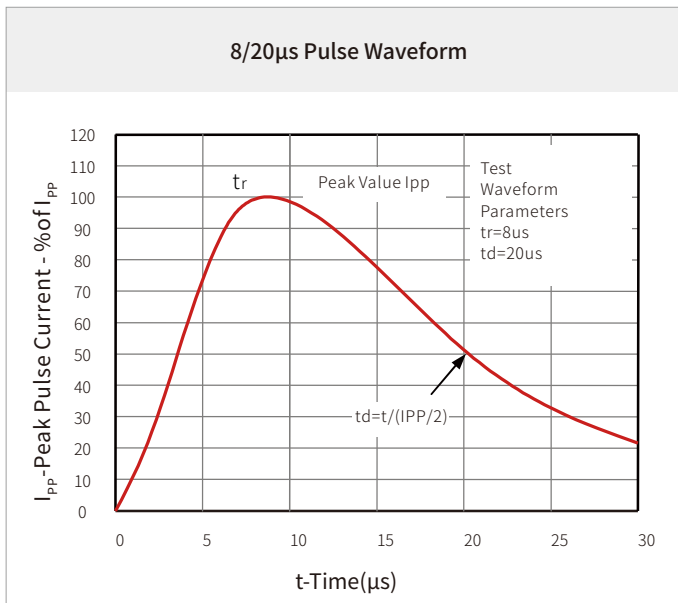
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------|---------------------------------------|-------------|-------|
| P_{PP} | Peak Pulse Power (tp=8/20μs waveform) | 150 | Watts |
| T_J | Operating Temperature Range | -55 to +125 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS

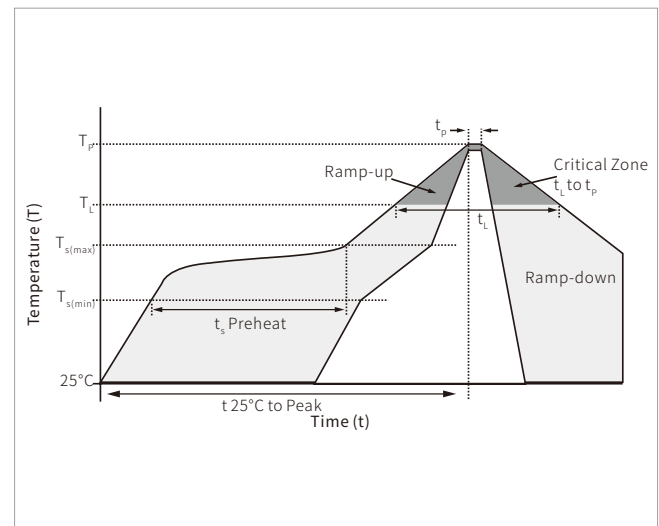
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|---------------------------|------|------|------|------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 36 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=1mA$ | 40 | | 48 | V |
| I_R | Reverse Leakage Current | $V_{RWM}=36V$ | | | 0.1 | μA |
| V_C | Clamping Voltage | $I_{PP}=1A, tp=8/20\mu s$ | | | 65 | V |
| I_{PP} | Peak Pulse Current | tp=8/20μs | | | 1 | A |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ | | 10 | 15 | pF |

CHARACTERISTIC CURVES

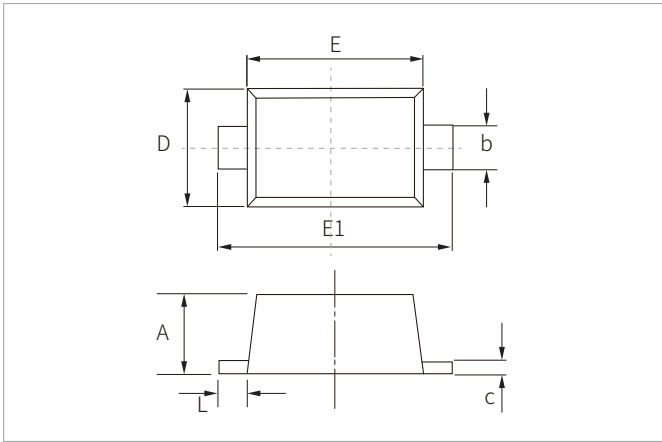


SOLDERING PARAMETERS

| Reflow Condition | | Lead-free assembly |
|--|----------------------------------|--------------------|
| Pre Heat | Temperature Max ($T_{s(min)}$) | 150°C |
| | Temperature Max ($T_{s(max)}$) | 200°C |
| | Time (min to max) (t_s) | 60 – 180 secs |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | | 3°C/second max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/second max |
| Reflow | Temperature (T_L) (Liquidus) | 217°C |
| | Time (min to max) (t_L) | 60 – 150 seconds |
| Peak Temperature (T_p) | | 260°C |
| Time within 5°C of actual peak Temperature (t_p) | | 20 – 40 seconds |
| Ramp-down Rate | | 6°C/second max |
| Time 25°C to peak Temperature (T_p) | | 8 minutes max. |
| Do not exceed | | 260°C |

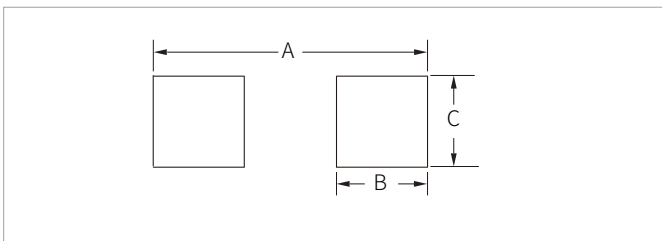


SOD-523 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.50 | 0.80 | 0.020 | 0.031 |
| b | 0.25 | 0.35 | 0.010 | 0.014 |
| c | 0.07 | 0.20 | 0.003 | 0.008 |
| D | 0.70 | 0.90 | 0.028 | 0.035 |
| E | 1.10 | 1.30 | 0.043 | 0.051 |
| E1 | 1.50 | 1.70 | 0.059 | 0.067 |
| L | 0.15 | 0.25 | 0.006 | 0.010 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches |
|------|-------------|--------|
| | Min. | Min. |
| A | 2.00 | 0.0787 |
| B | 0.60 | 0.0236 |
| C | 0.70 | 0.0276 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| SE5D15B36A | SOD-523 | 3000PCS | 7" |

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