

FEATURES

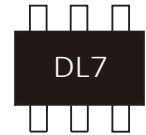
- | 500W Peak Pulse Power (tp=8/20µs)
- | Protects Four I/O Unidirectional Lines and V_{CC}
- | Working voltages : 5 V
- | Low Clamping Voltage

APPLICATIONS

- | LVDS Interfaces
- | 10/100/1000 Ethernet
- | Customer Premise Equipment
- | Serial ATA
- | ISDN interfaces
- | Automobile Applications
- | Peripherals
- | Infiniband Transceiver Protection



SOT-23-6



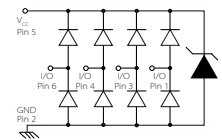
Marking

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 |



Schematic Symbol

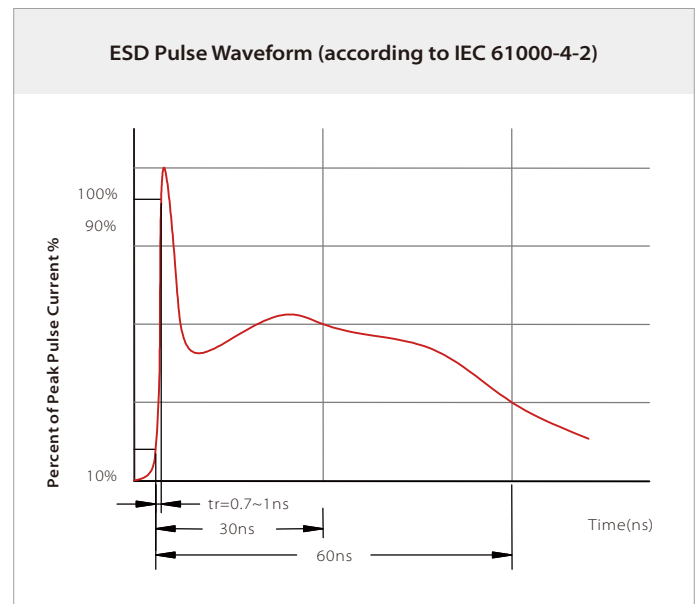
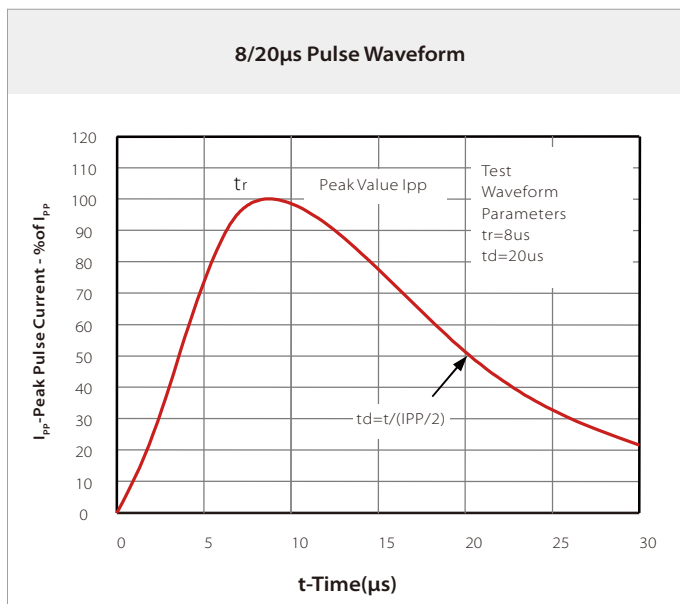
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|------------------|---------------------------------------|---------------|-------|
| P _{PP} | Peak Pulse Power (tp=8/20µs waveform) | 500 | Watts |
| T _J | Operating Temperature Range | -40 to +125 | °C |
| T _{STG} | Storage Temperature Range | -55 to +150 | °C |
| T _L | Lead Soldering Temperature | 260 (10 sec.) | °C |

ELECTRICAL CHARACTERISTICS

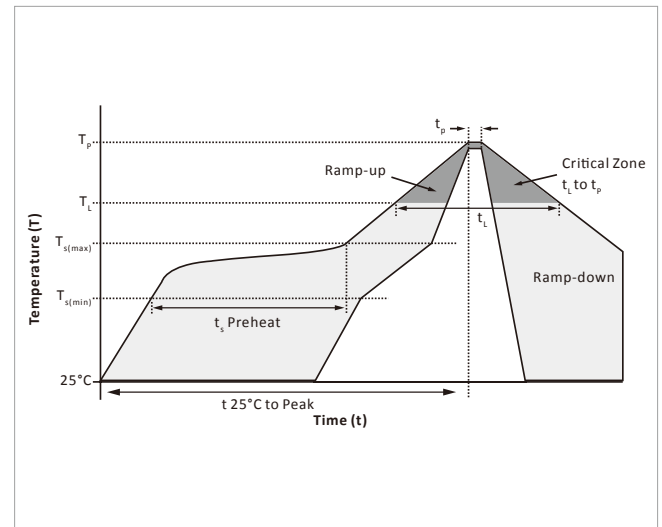
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--|---|------|------|------|---------------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 5 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=1\text{mA}$ | 6 | | | V |
| I_R | Reverse Leakage Current | $V_{RWM}=5\text{V}$ | | | 1 | μA |
| V_C | Clamping Voltage ($T_p=8/20\mu\text{s}$) | $I_{pp}=1\text{A}, t_p=8/20\mu\text{s}$ | | | 4.7 | V |
| V_C | Clamping Voltage ($T_p=8/20\mu\text{s}$) | $I_{pp}=10\text{A}, t_p=8/20\mu\text{s}$ | | | 14.5 | V |
| V_C | Clamping Voltage ($T_p=8/20\mu\text{s}$) | $I_{pp}=20\text{A}, t_p=8/20\mu\text{s}$ | | | 25 | V |
| I_{pp} | Peak Pulse Current ($T_p=8/20\mu\text{s}$) | $t_p=8/20\mu\text{s}$ | | | 20 | A |
| C_J | Off State Junction Capacitance | $V_R=0\text{V}, f=1\text{MHz}$ I/O-GND | | 4 | | pF |
| C_J | Off State Junction Capacitance | $V_R=0\text{V}, f=1\text{MHz}$ I/O-I-O | | 2 | | pF |

CHARACTERISTIC CURVES

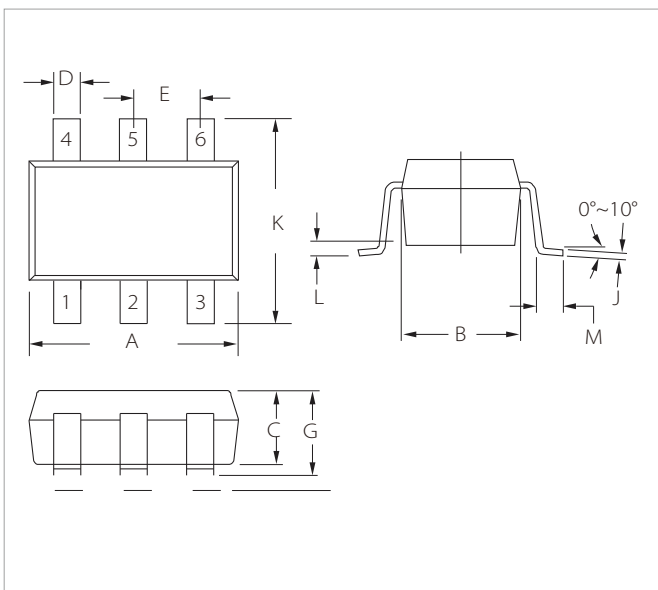


SOLDERING PARAMETERS

| 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_2) | 60 – 180 secs |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | | 3°C/second max |
| Reflow | $T_{s(max)}$ to T_L - Ramp-up Rate | 3°C/second max |
| | Temperature (T_L) (Liquidus) | 217°C |
| | Time (min to max) (t_1) | 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 |

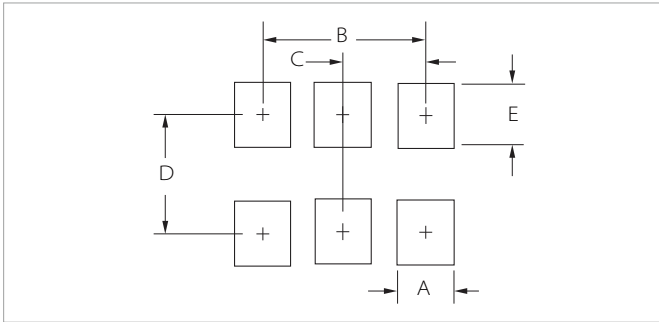


SOT-23-6 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.70 | 3.05 | 0.106 | 0.120 |
| B | 1.30 | 1.80 | 0.052 | 0.071 |
| C | 0.90 | 1.30 | 0.036 | 0.051 |
| D | 0.20 | 0.50 | 0.008 | 0.020 |
| E | 0.85 | 1.05 | 0.033 | 0.040 |
| G | 0.90 | 1.45 | 0.036 | 0.057 |
| J | 0.09 | 0.20 | 0.003 | 0.008 |
| K | 2.50 | 3.10 | 0.099 | 0.122 |
| L | 0.0 | 0.15 | 0.0 | 0.006 |
| M | 0.30 | 0.60 | 0.012 | 0.024 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches |
|------|-------------|---------|
| | Nominal | Nominal |
| A | 0.70 | 0.028 |
| B | 1.90 | 0.074 |
| C | 0.95 | 0.037 |
| D | 2.40 | 0.094 |
| E | 1.00 | 0.039 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|---------------|-------------------|----------|-----------|
| SE26T50U5.0LA | SOT-23-6 | 3000PCS | 7" |

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