



Micro Commercial Components



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ESDA6V1L

Features

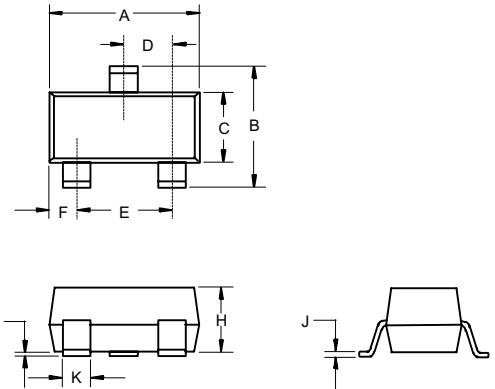
- Dual Transil Array For ESD Protection
- 2 Unidirectional Transil Functions
- Low leakageCurrent: $I_{Rmax} < 20 \mu A$ at V_{WM}
- 300W peak pulse power (8/20 us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

6.1Volts ESD Protection Device

Maximum Ratings

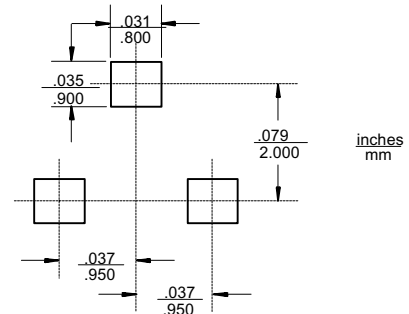
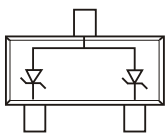
| Parameter | Symbol | Limits | unit |
|---|-----------|----------|------|
| Electrostatic discharge MIL STD 883C-Method 3015-6 | V_{PP} | 25 | KV |
| IEC61000-4-2 air discharge | | 16 | KV |
| IEC61000-4-2 contact discharge | | 9 | KV |
| Peak pulse power 8/20us | P_{PP} | 300 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -55~+150 | °C |
| Maximum lead temperature For soldering during 10s | T_L | 260 | °C |

SOT-23



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .110 | .120 | 2.80 | 3.04 | |
| B | .083 | .104 | 2.10 | 2.64 | |
| C | .047 | .055 | 1.20 | 1.40 | |
| D | .035 | .041 | .89 | 1.03 | |
| E | .070 | .081 | 1.78 | 2.05 | |
| F | .018 | .024 | .45 | .60 | |
| G | .0005 | .0039 | .013 | .100 | |
| H | .035 | .044 | .89 | 1.12 | |
| J | .003 | .007 | .085 | .180 | |
| K | .015 | .020 | .37 | .51 | |

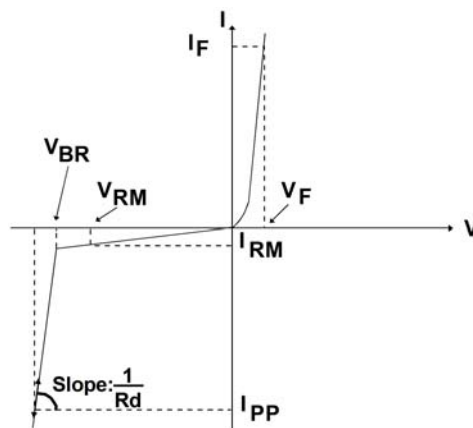
Pin Configuration-Top View



ESDA6V1L

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter |
|------------|---------------------------------|
| V_{WM} | Stand-off voltage |
| V_{BR} | Breakdown voltage |
| V_{CL} | Clamping voltage |
| I_{RM} | Leakage current |
| I_{PP} | Peak pulse current |
| αT | Voltage temperature coefficient |
| C | Capacitance |
| R_d | Dynamic resistance |
| V_F | Forward voltage drop |



| Parameter | Test Conditions | Symbol | Min | Typ | Max | Unit |
|----------------------|-----------------------|----------|-----|------|------|---------------|
| Breakdown voltage | $I_R=1.0\text{mA}$ | V_{BR} | 6.1 | 6.65 | 7.2 | V |
| Leakage current | $V_{WM}=5.25\text{V}$ | I_R | - | - | 20 | μA |
| Capacitance | 0V bias | C | - | 140 | - | pF |
| Forward voltage drop | $I_F=200\text{mA}$ | V_F | - | - | 1.25 | V |

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TYPICAL CHARACTERISTICS

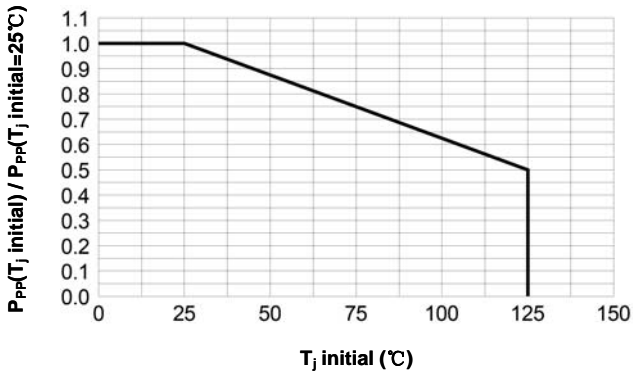


Fig.1: Peak power dissipation vs. initial junction temperature

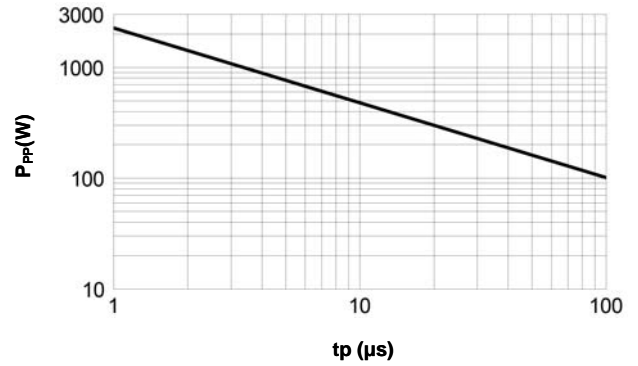


Fig.2: Peak pulse power vs. exponential pulse duration (T_j initial = 25°C)

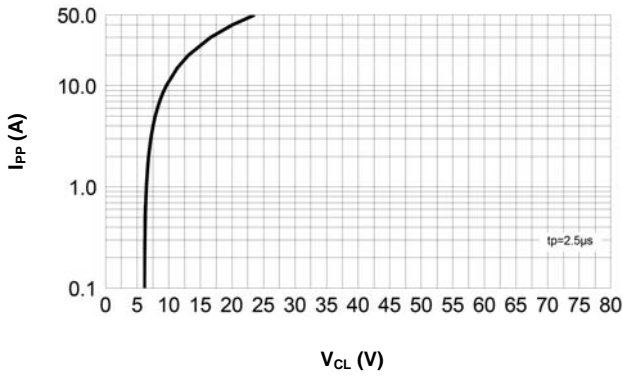


Fig.3: Clamping voltage vs. peak pulse current (T_j initial = 25°C, rectangular waveform tp = 2.5μs)

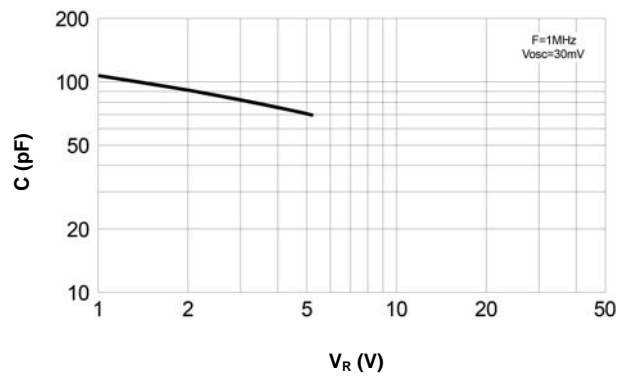


Fig.4: Capacitance vs. reverse applied voltage (typical values)

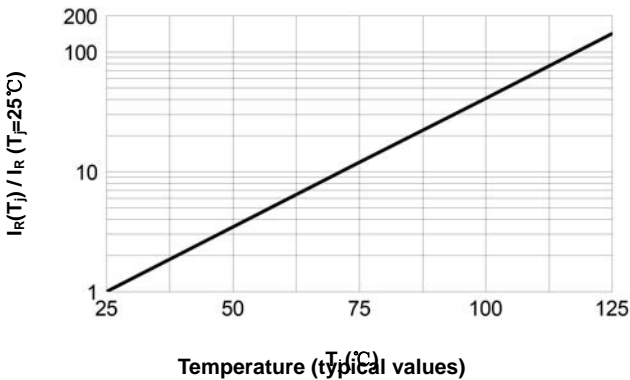


Fig.5: Relative variation of leakage current vs. junction

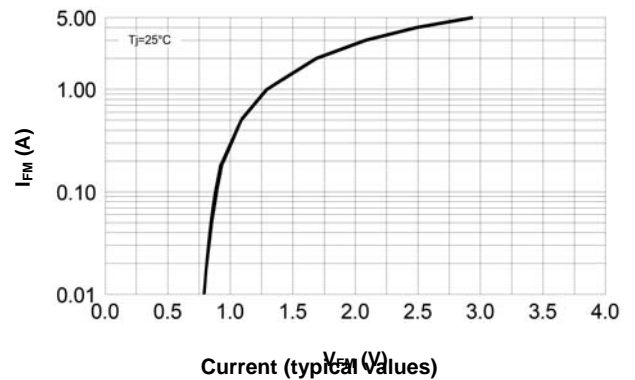


Fig.6: Peak forward voltage drop vs. peak forward



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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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