

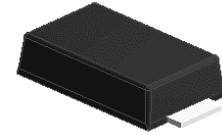
200W,10 - 190V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 200 W peak pulse power capability with a 10/1000 μ s waveform



RoHS
COMPLIANT



eSGB (DO-221AC)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Ratings | Unit |
|--|-----------------|----------------|--------------------|
| Peak power dissipation with a 10/1000us waveform | P_{PPM} | 200 | W |
| Peak pulse current with a 10/1000us waveform | I_{PPM} | See Next Table | A |
| Power dissipation, on infinite heat sink at $T_L=75^\circ\text{C}$ | P_D | 4 | W |
| Peak forward surge current, 8.3ms single half-sine wave | I_{FSM} | 30 | A |
| Typical Thermal Resistance , Junction to Ambient | $R_{\theta JA}$ | 85 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance , Junction to Case | $R_{\theta JC}$ | 15 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance , Junction to Lead | $R_{\theta JL}$ | 18 | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |



L2TVS10A thru L2TVS190A

GOOD-ARK Electronics

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

| Part Number | Marking | Breakdown Voltage VBR (Volts) | | Test Current I _T (mA) | Stand off Voltage V _{WM} (Volts) | Maximum reverse leakage at V _{WM} I _D (μA) | Maximum Peak Pulse Current I _{ppM} (A) | Maximum Clamping Voltage at I _{ppM} V _C (Volts) |
|-------------|---------|-------------------------------|------|----------------------------------|---|--|---|---|
| | | Min | Max | | | | | |
| L2TVS10A | 10A | 11.1 | 12.3 | 1.0 | 10 | 5.0 | 11.8 | 17.0 |
| L2TVS11A | 11A | 12.2 | 13.5 | 1.0 | 11 | 5.0 | 11.0 | 18.2 |
| L2TVS12A | 12A | 13.3 | 14.7 | 1.0 | 12 | 5.0 | 10.1 | 19.9 |
| L2TVS13A | 13A | 14.4 | 15.9 | 1.0 | 13 | 5.0 | 9.30 | 21.5 |
| L2TVS14A | 14A | 15.6 | 17.2 | 1.0 | 14 | 5.0 | 8.62 | 23.2 |
| L2TVS15A | 15A | 16.7 | 18.5 | 1.0 | 15 | 5.0 | 8.20 | 24.4 |
| L2TVS16A | 16A | 17.8 | 19.7 | 1.0 | 16 | 5.0 | 7.69 | 26.0 |
| L2TVS17A | 17A | 18.9 | 20.9 | 1.0 | 17 | 5.0 | 7.25 | 27.6 |
| L2TVS18A | 18A | 20.0 | 22.1 | 1.0 | 18 | 5.0 | 6.85 | 29.2 |
| L2TVS20A | 20A | 22.2 | 24.5 | 1.0 | 20 | 5.0 | 6.17 | 32.4 |
| L2TVS22A | 22A | 24.4 | 26.9 | 1.0 | 22 | 5.0 | 5.63 | 35.5 |
| L2TVS24A | 24A | 26.7 | 29.5 | 1.0 | 24 | 5.0 | 5.14 | 38.9 |
| L2TVS26A | 26A | 28.9 | 31.9 | 1.0 | 26 | 5.0 | 4.75 | 42.1 |
| L2TVS28A | 28A | 31.1 | 34.4 | 1.0 | 28 | 5.0 | 4.41 | 45.4 |
| L2TVS30A | 30A | 33.3 | 36.8 | 1.0 | 30 | 5.0 | 4.13 | 48.4 |
| L2TVS33A | 33A | 36.7 | 40.6 | 1.0 | 33 | 5.0 | 3.75 | 53.3 |
| L2TVS36A | 36A | 40.0 | 44.4 | 1.0 | 36 | 5.0 | 3.44 | 58.1 |
| L2TVS40A | 40A | 44.4 | 49.1 | 1.0 | 40 | 5.0 | 3.10 | 64.5 |
| L2TVS43A | 43A | 47.8 | 52.8 | 1.0 | 43 | 5.0 | 2.88 | 69.4 |
| L2TVS45A | 45A | 50.0 | 55.3 | 1.0 | 45 | 5.0 | 2.75 | 72.7 |
| L2TVS48A | 48A | 53.3 | 58.9 | 1.0 | 48 | 5.0 | 2.58 | 77.4 |
| L2TVS51A | 51A | 56.7 | 62.7 | 1.0 | 51 | 5.0 | 2.43 | 82.4 |
| L2TVS54A | 54A | 60.0 | 66.3 | 1.0 | 54 | 5.0 | 2.30 | 87.1 |
| L2TVS58A | 58A | 64.4 | 71.2 | 1.0 | 58 | 5.0 | 2.14 | 93.6 |
| L2TVS60A | 60A | 66.7 | 73.7 | 1.0 | 60 | 5.0 | 2.07 | 96.8 |
| L2TVS64A | 64A | 71.1 | 78.6 | 1.0 | 64 | 5.0 | 1.94 | 103 |
| L2TVS70A | 70A | 77.8 | 86.0 | 1.0 | 70 | 5.0 | 1.77 | 113 |
| L2TVS75A | 75A | 83.3 | 92.1 | 1.0 | 75 | 5.0 | 1.65 | 121 |
| L2TVS78A | 78A | 86.7 | 95.8 | 1.0 | 78 | 5.0 | 1.59 | 126 |
| L2TVS80A | 80A | 88.8 | 97.6 | 1.0 | 80 | 5.0 | 1.55 | 129 |
| L2TVS85A | 85A | 94.4 | 104 | 1.0 | 85 | 5.0 | 1.46 | 137 |
| L2TVS90A | 90A | 100 | 111 | 1.0 | 90 | 5.0 | 1.37 | 146 |
| L2TVS100A | 100A | 111 | 123 | 1.0 | 100 | 5.0 | 1.23 | 162 |
| L2TVS110A | 110A | 122 | 135 | 1.0 | 110 | 5.0 | 1.13 | 177 |

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

| Part Number | Marking | Breakdown Voltage VBR (Volts) | | Test Current I _T (mA) | Stand off Voltage V _{WM} (Volts) | Maximum reverse leakage at V _{WM} I _D (μA) | Maximum Peak Pulse Current I _{ppM} (A) | Maximum Clamping Voltage at I _{ppM} V _C (Volts) |
|-------------|---------|-------------------------------|-----|----------------------------------|---|--|---|---|
| | | Min | Max | | | | | |
| L2TVS120A | 120A | 133 | 147 | 1.0 | 120 | 5.0 | 1.04 | 193 |
| L2TVS130A | 130A | 144 | 159 | 1.0 | 130 | 5.0 | 0.96 | 209 |
| L2TVS140A | 140A | 155 | 171 | 1.0 | 140 | 5.0 | 0.89 | 224 |
| L2TVS150A | 150A | 167 | 185 | 1.0 | 150 | 5.0 | 0.82 | 243 |
| L2TVS160A | 160A | 178 | 197 | 1.0 | 160 | 5.0 | 0.77 | 259 |
| L2TVS170A | 170A | 189 | 209 | 1.0 | 170 | 5.0 | 0.73 | 275 |
| L2TVS180A | 180A | 201 | 222 | 1.0 | 180 | 5.0 | 0.69 | 292 |
| L2TVS190A | 190A | 211 | 232 | 1.0 | 190 | 5.0 | 0.62 | 324 |

Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 5×5mm copper pads

Ratings and Characteristics Curves

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

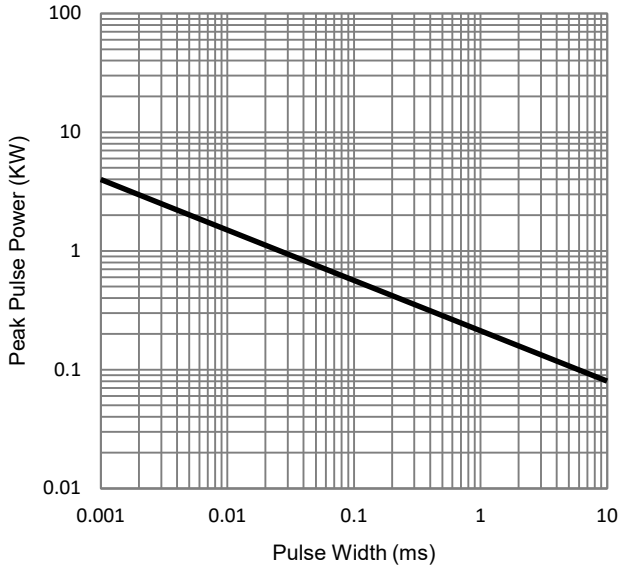


Fig.1 - Peak Pulse Power Derating Curve

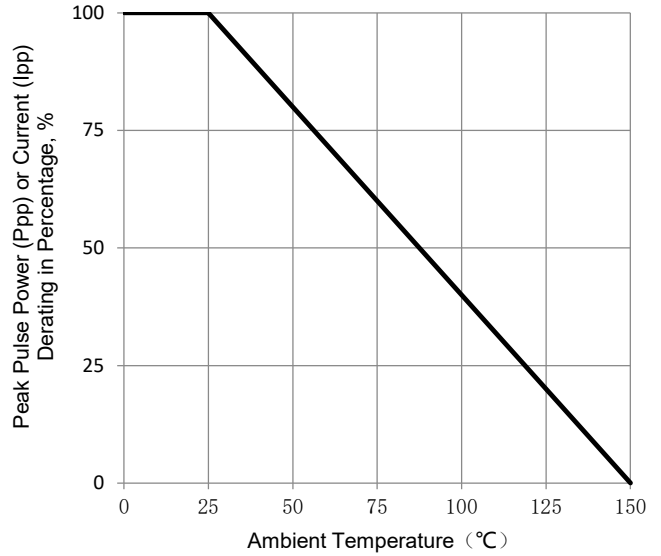


Fig.2 - Pulse Power vs Ambient Temperature

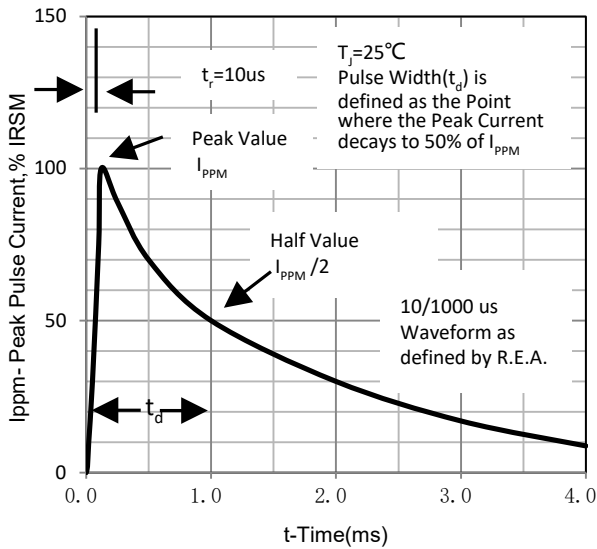


Fig.3 - Pulse Waveform

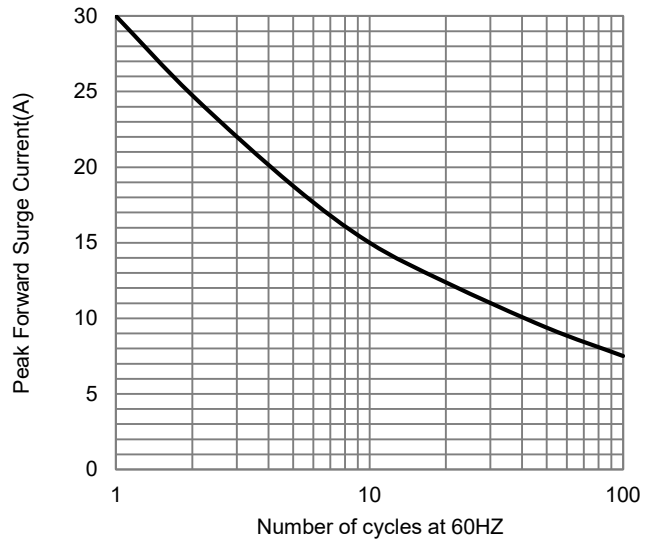
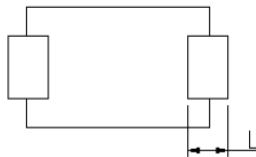
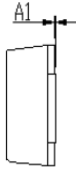
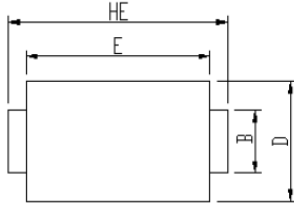


Fig.4 - Maximum Non-Repetitive Surge Current

Package Outline Dimensions

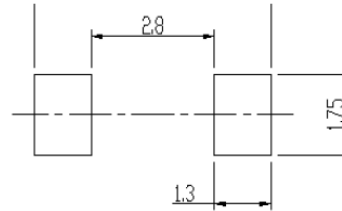
in inches (millimeters)

eSGB (DO-221AC)



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.92 | 1.08 | 0.036 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 1.25 | 1.45 | 0.049 | 0.057 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 2.6 | 2.8 | 0.102 | 0.110 |
| E | 4.1 | 4.3 | 0.161 | 0.169 |
| L | 0.7 | 1.1 | 0.028 | 0.043 |
| HE | 4.8 | 5.2 | 0.189 | 0.205 |

Soldering footprint



Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A | 2021.06.15 | Released Datasheet |
| Rev.B | 2023.10.12 | Modify document format |
| Rev.C | 2023.12.29 | Modify package name |

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