

**Features**

- Ultra Low Capacitance
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

|   |                 |                |
|---|-----------------|----------------|
| MCC Part Number                             | Device Marking  |                |
| ESDSL5V0AE2                                 | ZZ              |                |
| IEC61000-4-2(ESD)                           | Air Contact     | ±20KV<br>±20KV |
| Maximum Reverse Peak Pulse Current (8/20us) | I <sub>PP</sub> | 5A             |
| Peak Pulse Power (8/20us Waveform)          | P <sub>PK</sub> | 125W           |

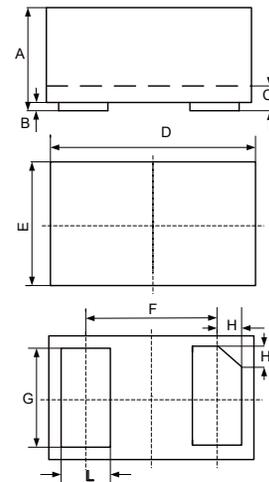
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**Pin Configuration**



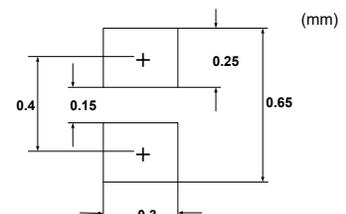
**ESD Protection Device**

**0201-A**



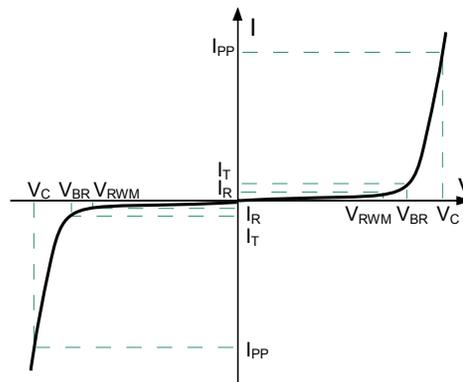
| DIM | INCHES |       | MM    |      | NOTE |
|-----|--------|-------|-------|------|------|
|     | MIN    | MAX   | MIN   | MAX  |      |
| A   | 0.009  | 0.013 | 0.23  | 0.33 |      |
| B   | 0.000  | 0.002 | 0.00  | 0.05 |      |
| C   | 0.005  | 0.007 | 0.12  | 0.18 |      |
| D   | 0.022  | 0.026 | 0.55  | 0.65 |      |
| E   | 0.010  | 0.014 | 0.25  | 0.35 |      |
| F   | 0.014  |       | 0.355 |      | TYP. |
| G   | 0.008  | 0.011 | 0.22  | 0.28 |      |
| H   | 0.003  |       | 0.079 |      | TYP. |
| L   | 0.006  | 0.009 | 0.16  | 0.22 |      |

**SUGGESTED SOLDER PAD LAYOUT**



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

| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
| C         | Capacitance @ $V_R=0$ and $f=1\text{MHz}$   |



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

| Parameter                            | Symbol    | Conditions                              | Min. | Typ. | Max. | Units         |
|--------------------------------------|-----------|---|------|------|------|---------------|
| Reverse Working Voltage              | $V_{RWM}$ |   |      |      | 5    | V             |
| Reverse Breakdown Voltage            | $V_{BR}$  | $I_T = 1\text{mA}$                      | 6.5  |      | 9.5  | V             |
| Reverse Leakage Current              | $I_R$     | $V_{RWM}=5\text{V}$                     |      | 0.02 | 0.1  | $\mu\text{A}$ |
| Clamping Voltage <sup>(Note 2)</sup> | $V_C$     | $I_{PP}=8\text{A}, t_p=100\text{ns}$    |      | 21   |      | V             |
| Clamping Voltage <sup>(Note 2)</sup> | $V_C$     | $I_{PP}=16\text{A}, t_p=100\text{ns}$   |      | 30   |      | V             |
| Clamping Voltage                     | $V_C$     | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$ |      |      | 12   | V             |
| Clamping Voltage                     | $V_C$     | $I_{PP}=5\text{A}, t_p=8/20\mu\text{s}$ |      |      | 25   | V             |
| Junction Capacitance                 | $C_J$     | $V_R=0\text{V}, f=1\text{MHz}$          |      | 0.26 | 0.32 | pF            |

Note:

2. TLP Parameter:  $Z_0=50\Omega, t_p=100\text{ns}, t_r=2\text{ns}$ , Averaging Window from 60ns to 80ns.  $R_{DYN}$  is Calculated from 4A to 16A.

**Curve Characteristics**

Fig. 1 - 8 X 20µs Pulse Waveform

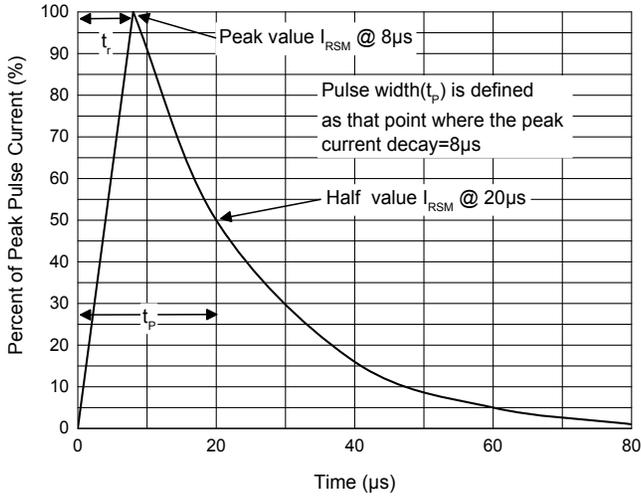


Fig. 2 - Pulse Derating Curve

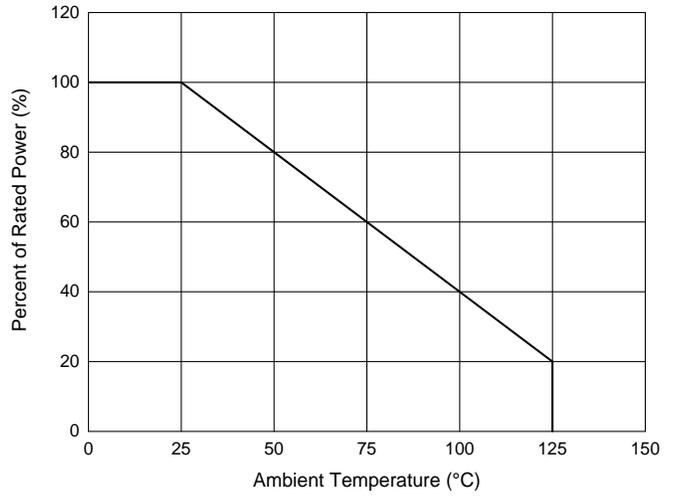


Fig. 3 - Capacitance Characteristics

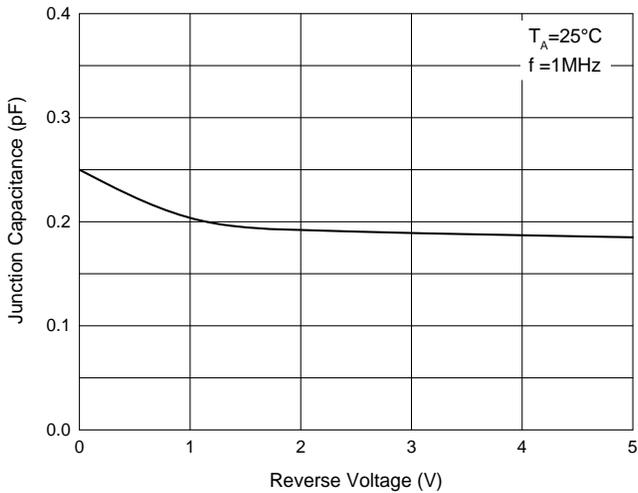


Fig. 4 - Clamping Voltage Characteristics

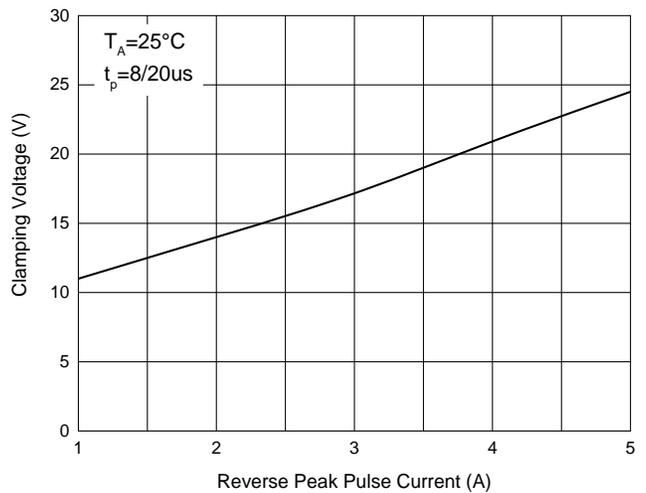
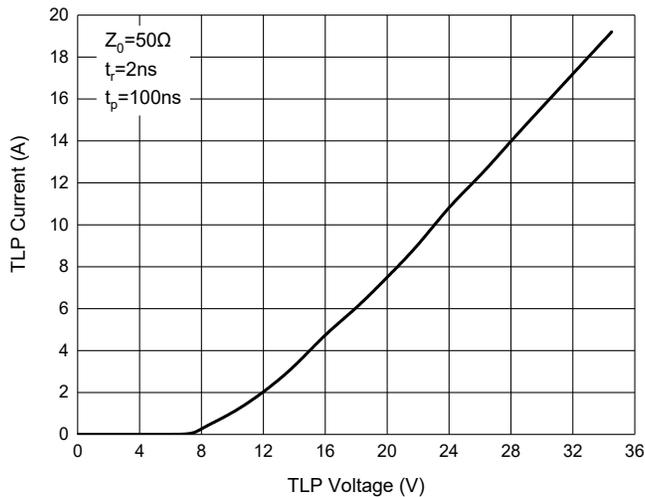


Fig. 5 - TLP Measurement



## Ordering Information

| Device         | Packing                |
|----------------|------------------------|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel |

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