

Features

- AEC-Q101 Qualified
- Protects One Data or Power Line
- Ultra Low Leakage
- 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

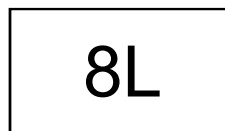
| | | |
|--------------------------------------|------------------|---------------|
| IEC61000-4-2(ESD) | Air | ±30KV |
| | Contact | ±30KV |
| Peak Pulse Power (8/20µs) | PPK | 140W |
| Peak Pulse Current (8/20µs)(Note 2) | I _{PP} | 8A |
| Operating Junction Temperature Range | T _J | -55 to +150°C |
| Storage Temperature Range | T _{STG} | -55 to +150°C |

Note:
 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 2. Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC61000-4-5.

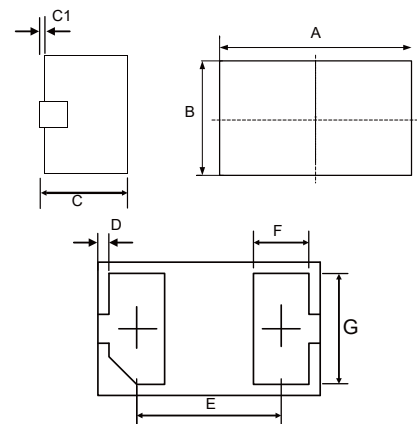
Internal Structure



Marking Code

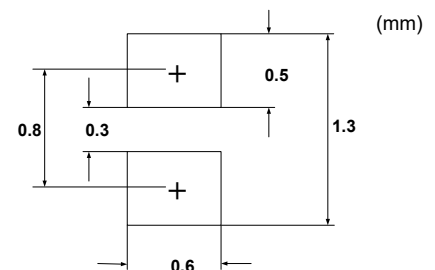


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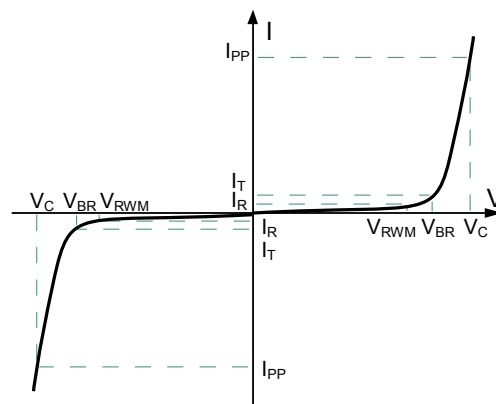


| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.037 | 0.041 | 0.95 | 1.05 | |
| B | 0.022 | 0.026 | 0.55 | 0.65 | |
| C | 0.016 | 0.022 | 0.40 | 0.50 | |
| C1 | ----- | 0.004 | ----- | 0.05 | |
| D | 0.001 | 0.003 | 0.02 | 0.08 | |
| E | 0.026 | | 0.65 | | TYP. |
| F | 0.008 | 0.012 | 0.20 | 0.30 | |
| G | 0.018 | 0.022 | 0.45 | 0.55 | |

SUGGESTED SOLDER PAD LAYOUT



| 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} | | | | 8 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1\text{mA}$ | 9 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=8\text{V}$ | | | 0.2 | μA |
| Clamping Voltage ^{Note1} | V_C | $I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$ | | 10.5 | 14 | V |
| Clamping Voltage ^{Note1} | V_C | $I_{PP}=8\text{A}$, $t_p=8/20\mu\text{s}$ | | 15.5 | 18 | V |
| Junction Capacitance | C_J | $V_R=0\text{V}$, $f=1\text{MHz}$ | | 9 | 10 | pF |
| Dynamic Resistance ^{Note2} | R_{DYN} | TLP, $t_p=100\text{ns}$ | | 1 | | Ω |

Note:

1. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

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

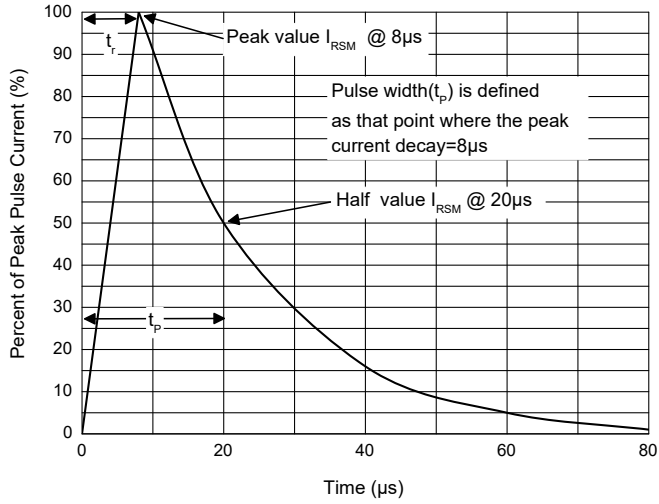


Fig. 2 - Capacitance Characteristics

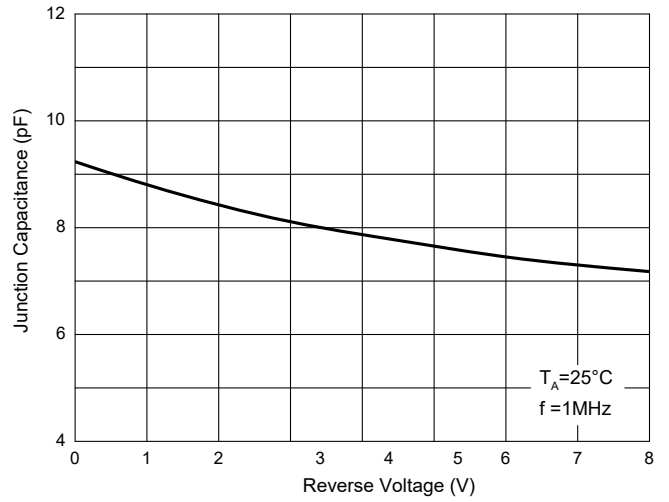


Fig. 3 - Clamping Voltage Characteristics

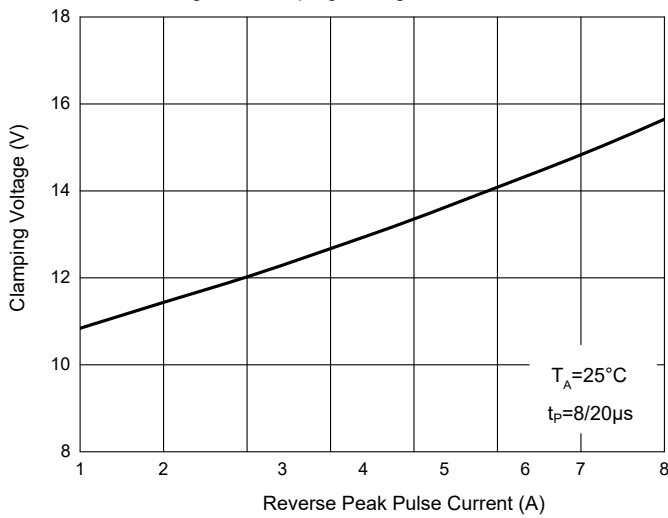


Fig. 4 - TLP Measurement

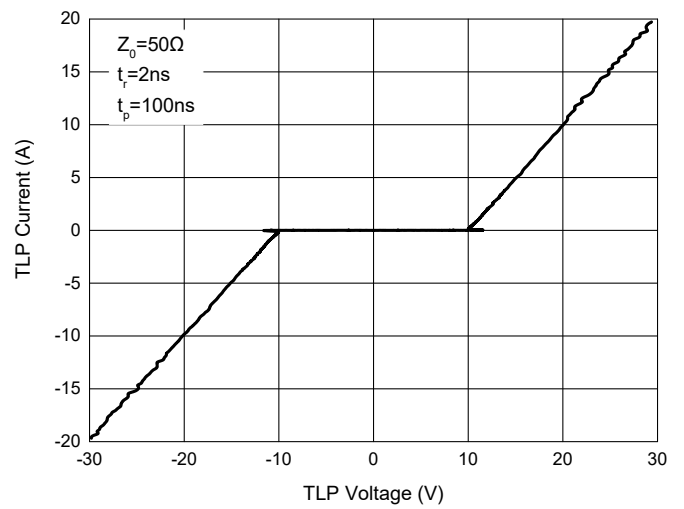
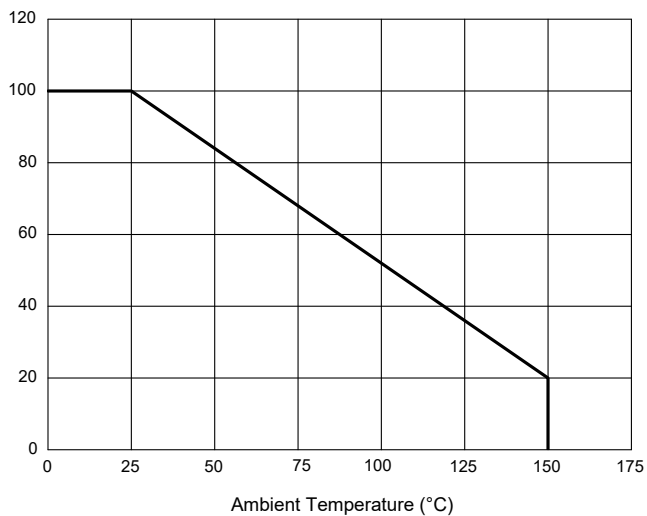


Fig. 5 - Pulse Derating Curve



Ordering Information

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

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