

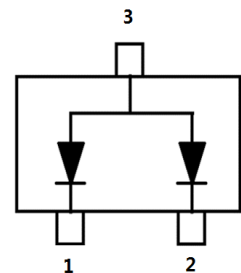
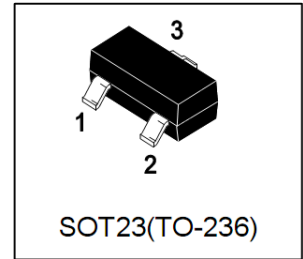
LMBZ27VALT1G

S-LMBZ27VALT1G

Dual Common Anode Zeners for ESD Protection

1. FEATURES

- Working Peak Reverse Voltage Range – 3 V to 26 V.
- Standard Zener Breakdown Voltage Range – 5.6 V to 33 V.
- Peak Power – 24 or 40 Watts @ 1.0 ms (Unidirectional), per Figure 5 Waveform.
- ESD Rating of Class N (exceeding 16 kV) per the Human Body Model.
- Low Leakage < 5.0 μ A.
- Flammability Rating UL 94 V-O
- Complies with IEC 61000-4-2 standards: Air discharge: \pm 30kV
Contact discharge: \pm 30kV
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|--------------|---------|-----------------|
| LMBZ27VALT1G | 27A | 3000/Tape&Reel |
| LMBZ27VALT3G | 27A | 10000/Tape&Reel |

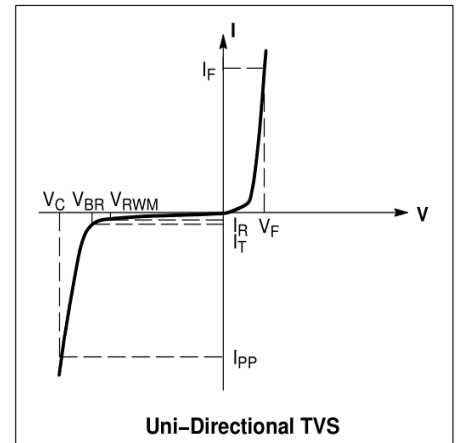
3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter | Symbol | Limits | Unit |
|--|---------------|----------|-------|
| Peak Power Dissipation @ 1.0 ms (Note 1) | Ppk | 40 | W |
| Total Power Dissipation(Note 2) @TA=25°C | PD | 250 | mW |
| Derate above 25°C | | 2 | mW/°C |
| Thermal Resistance Junction-to-Ambient | R θ JA | 500 | °C/W |
| Junction Temperature Range | TJ | -55~+150 | °C |
| Storage Temperature Range | Tstg | -55~+150 | °C |
| Lead Solder Temperature – Maximum (10 Second Duration) | TL | 260 | °C |

1. Non-repetitive current pulse and derate above TA = 25°C .
2. 30.0mm×25.0mm×1.6mm(FR4), Copper foil thickness 35 μ m;

4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

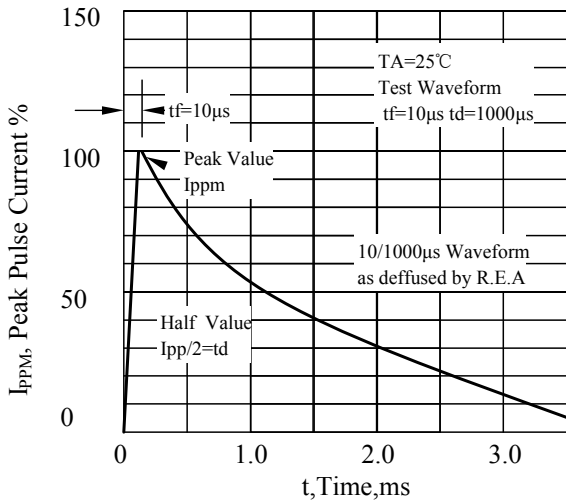
| Symbol | Parameter |
|--------|--|
| IPP | Maximum Reverse Peak Pulse Current |
| VC | Clamping Voltage @IPP |
| VRWM | Working Peak Reverse Voltage |
| IR | Maximum Reverse Leakage Current @VRWM |
| VBR | Breakdown Voltage @IT |
| IT | Test Current |
| θVBR | Maximum Temperature Coefficient of VBR |
| IF | Forward Current |
| VF | Forward Voltage @IF |
| ZZT | Maximum Zener Impedance @IZT |
| IZK | Reverse Current |
| ZZK | Maximum Zener Impedance @IZK |



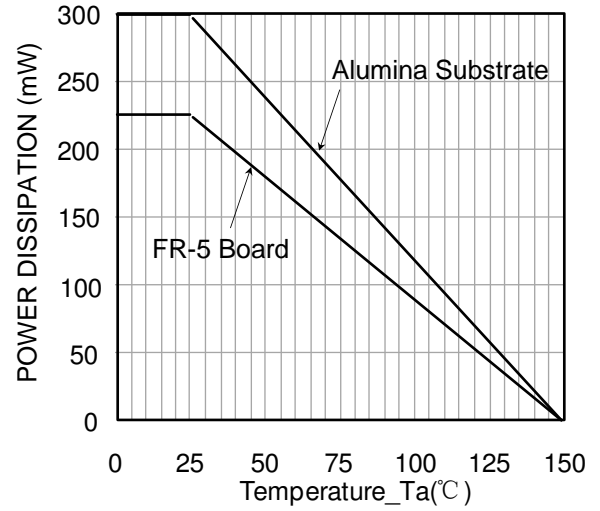
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)(VF ≤ 0.9V @IF = 10 mA)

| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|---|--------|-------|------|-------|-------|
| Breakdown Voltage (IT = 1mA) | VBR | 25.65 | 27 | 28.35 | V |
| Maximum Reverse Leakage Current (VRWM =22V) | IR | - | - | 50 | nA |
| Clamping Voltage (IPP=1A) | VC | - | - | 38 | V |
| Junction Capacitance (f=1MHz, Level=50mV, VR=0V) | Cj | - | - | 60 | pF |
| Maximum Temperature Coefficient of VBR | θVBR | - | - | 24.3 | mV/°C |

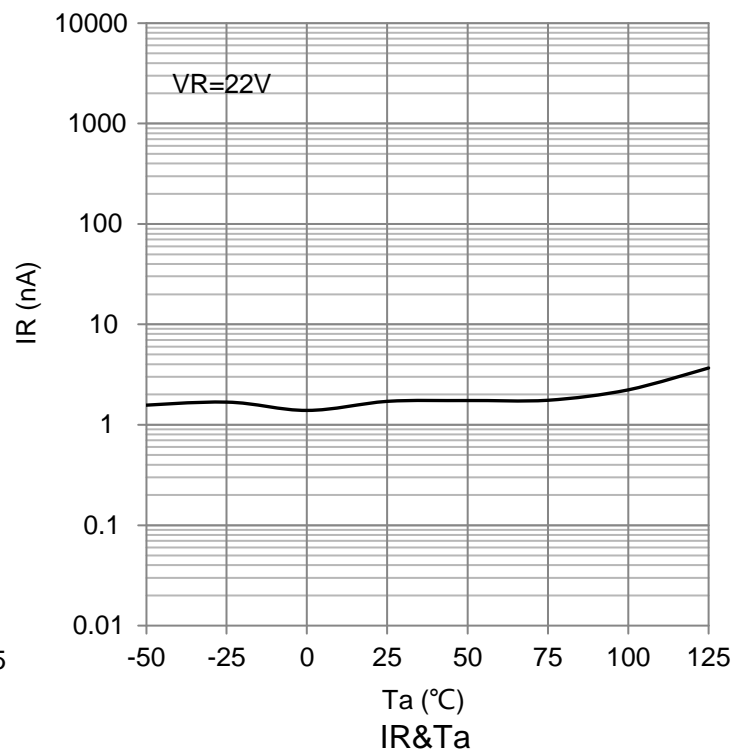
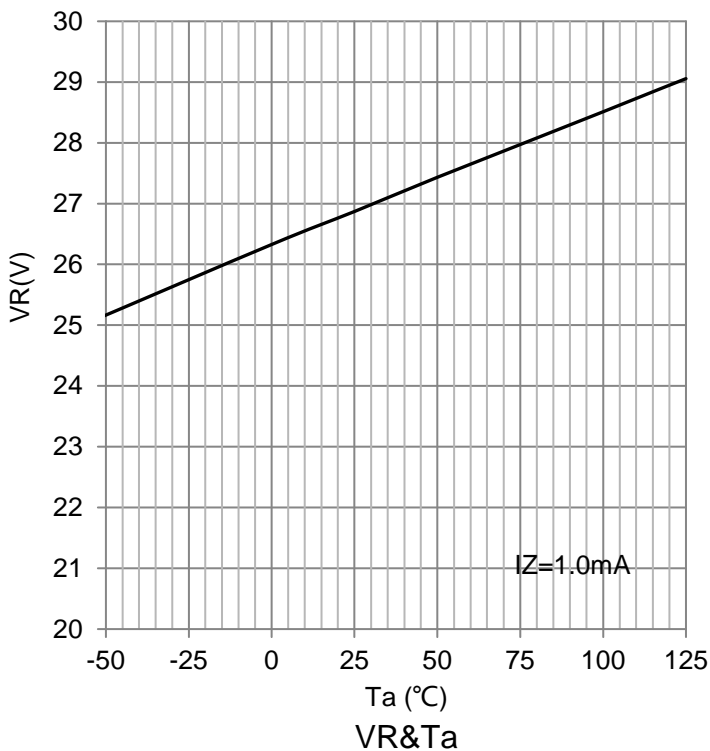
6.ELECTRICAL CHARACTERISTICS CURVES



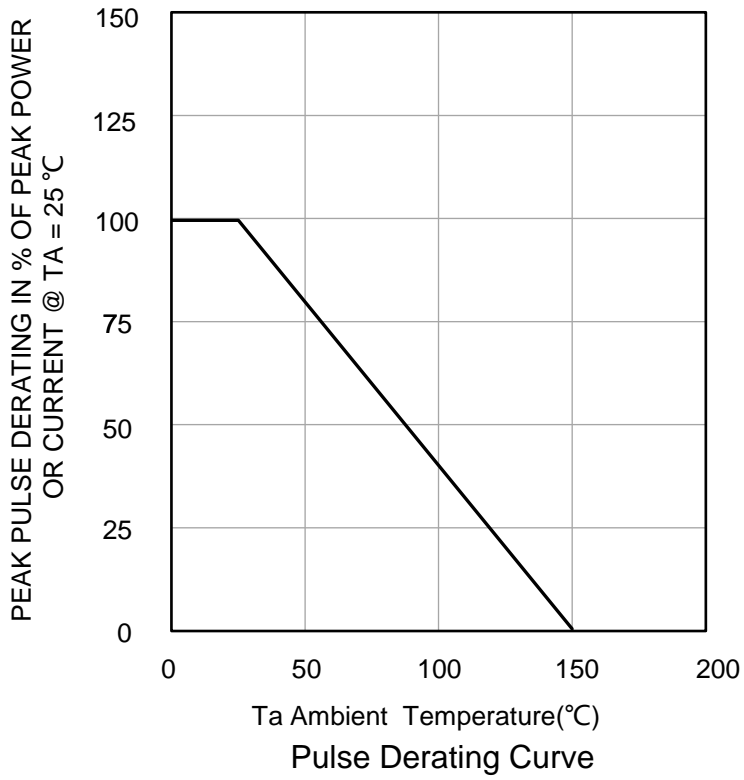
Pulse Waveform



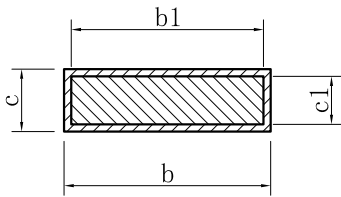
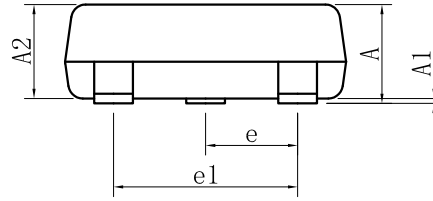
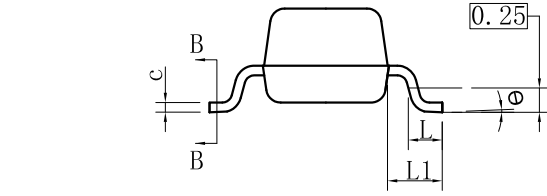
Steady State Power Derating Curve



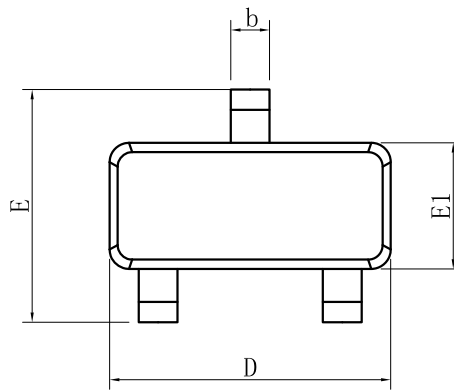
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS



SECTION B-B

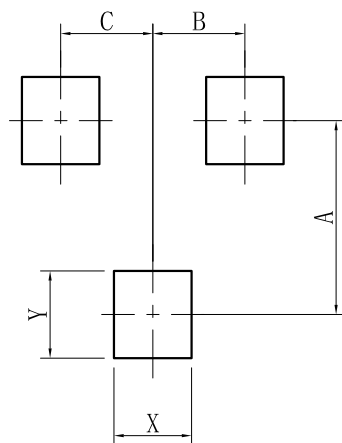


| SOT23 | | | |
|----------------------|---------|------|------|
| DIM | MIN | NOR | MAX |
| A | 0.89 | - | 1.12 |
| A1 | 0.01 | - | 0.10 |
| A2 | 0.88 | 0.95 | 1.02 |
| b | 0.30 | - | 0.50 |
| b1 | 0.30 | 0.40 | 0.45 |
| c | 0.08 | - | 0.20 |
| c1 | 0.08 | 0.10 | 0.16 |
| D | 2.80 | 2.90 | 3.04 |
| E | 2.10 | - | 2.64 |
| E1 | 1.20 | 1.30 | 1.40 |
| e | 0.95BSC | | |
| e1 | 1.90BSC | | |
| L | 0.40 | 0.46 | 0.60 |
| L1 | 0.54REF | | |
| θ | 0° | - | 8° |
| All Dimensions in mm | | | |

GENERAL NOTES

- 1.Top package surface finish Ra0.4±0.2um
- 2.Bottom package surface finish Ra0.7±0.2um
- 3.Side package surface finish Ra0.4±0.2um

8.SOLDERING FOOTPRINT



| SOT-23 | |
|--------|------|
| DIM | (mm) |
| X | 0.80 |
| Y | 0.90 |
| A | 2.00 |
| B | 0.95 |
| C | 0.95 |

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
- Before you use our Products for new Project, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.