

HIGH VOLTAGE SURFACE MOUNT SWITCHING DIODE

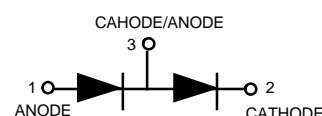
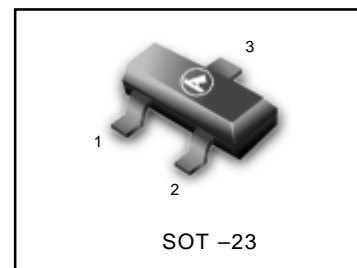
FETURE

- Fast Switching Speed
- High Conductance
- High Reverse Breakdown Voltage Rating
- We declare that the material of product compliance with RoHS requirements.

Ordering Information(Pb-free)

| Device | Marking | Shipping |
|---------------|---------|-----------------|
| LMBD3004SLT1G | KAE | 3000/Tape&Reel |
| LMBD3004SLT3G | KAE | 10000/Tape&Reel |

LMBD3004SLT1G



Maximum Ratings @ T_A=25°C unless otherwise specified

| Characteristic | Symbol | LMC10114L | Unit |
|--|-----------------------------------|-------------|------|
| Repetitive Peak Reverse Voltage | VRRM | 350 | V |
| Working Peak Reverse Voltage | VRWM | 300 | V |
| DC Blocking Voltage | VR | | |
| RMS Reverse Voltage | VR(RMS) | 212 | V |
| Forward Continuous Current(Note 2) | I _F | 225 | mA |
| Peak Repetitive Forward Current(Note 2) | I _{FRM} | 625 | mA |
| Non-Repetitive Peak Forward Surge Current | I _{FSM} | @t=1.0μs | 4.0 |
| | | @t=1.0s | 1.0 |
| Power Dissipation(Note 2) | P _d | 350 | mW |
| Thermal Resistance Junction to Ambient Air(Note 2) | R _{θJA} | 357 | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | °C |

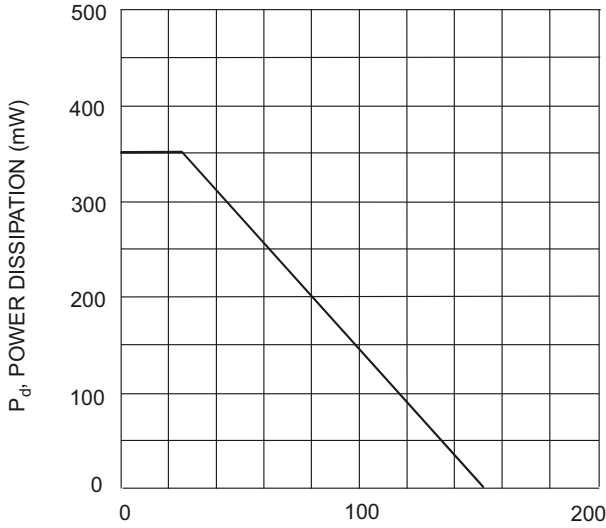
Electrical Characteristics @ T_A=25°C unless otherwise specified, per element

| Characteristic | Symbol | Min | Typ | MAX | Unit | Test Condition |
|-----------------------------------|--------------------|-----|------|------|------|--|
| Reverse Breakdown Voltage(Note 1) | V _{(BR)R} | 350 | | | V | I _R =100μA |
| Forward Voltage(Note 1) | V _F | | 0.78 | 0.87 | V | I _F =20mA |
| | | | 0.93 | 1.0 | | I _F =100mA |
| | | | 1.03 | 1.25 | | I _F =200mA |
| Reverse Current(Note 1) | I _R | | 30 | 100 | nA | V _R =240V |
| | | | 35 | 100 | μA | V _R =240V, T _j =150°C |
| Total Capacitance | C _T | | 1.0 | 5.0 | Pf | V _R =0V, f=1.0MHZ |
| Reverse Recovery Time | T _{rr} | | | 50 | ns | I _F =I _R =30mA I _{rr} =3.0mA, R _L =100Ω |

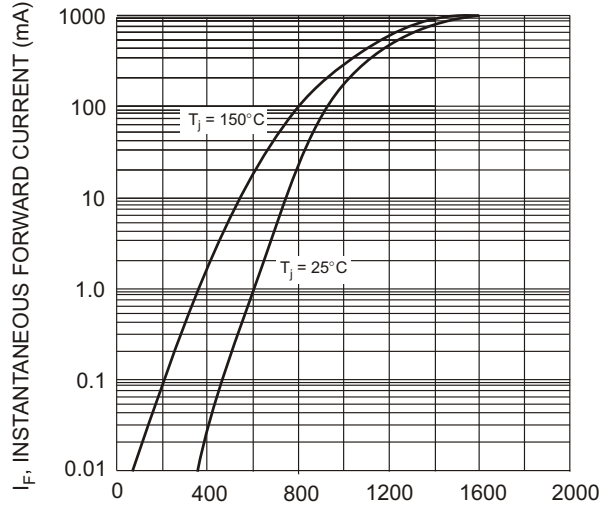
- Notes: 1. Short duration test pulse used to minimize self-heating effect.
2. Part mounted on FR-4 board with recommended pad layout.



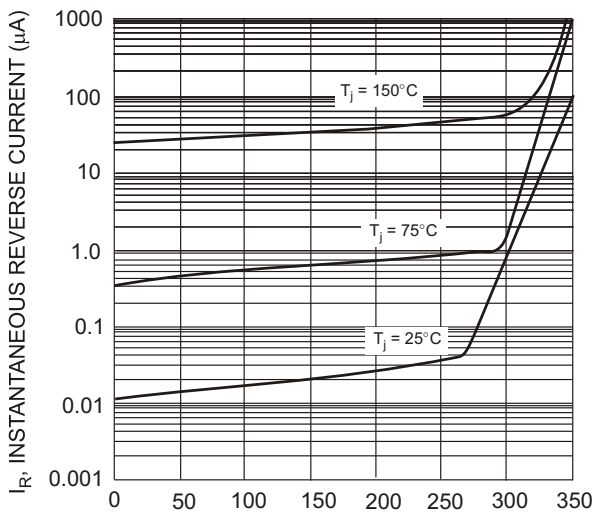
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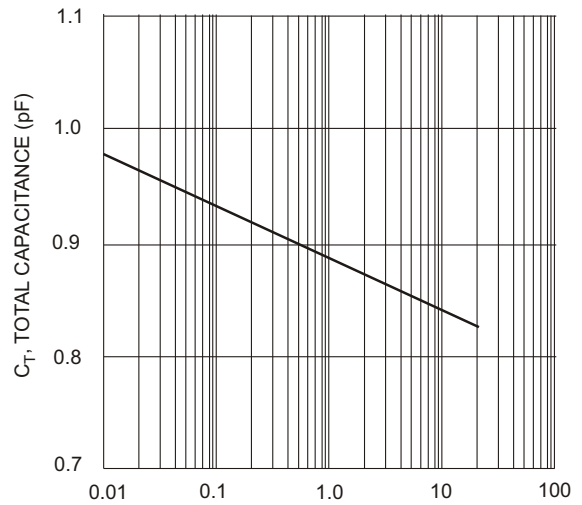
T_A, AMBIENT TEMPERATURE, (°C)
Fig. 1 Power Derating Curve, total package



V_F, INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics, per element



V_R, INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics, per element



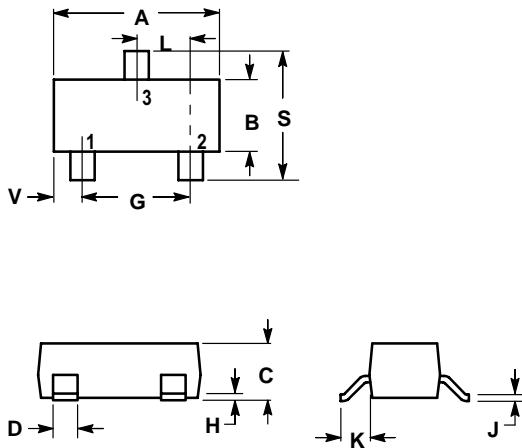
V_R, REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

LMBD3004SLT1G

SOT-23

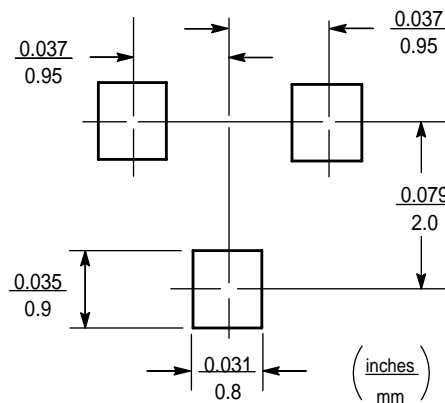
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.

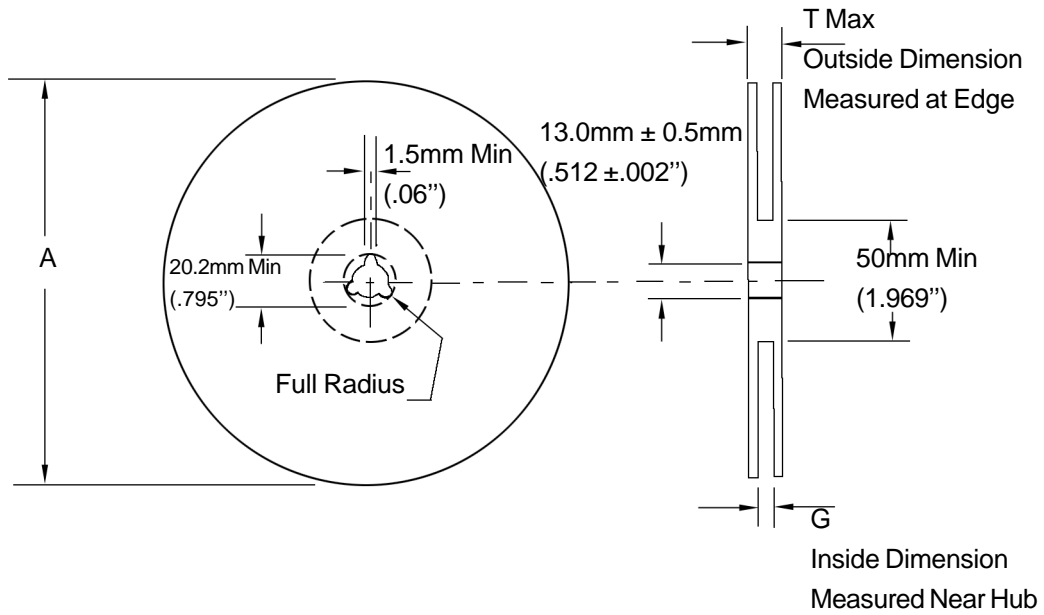


| DIM | INCHES | | MILLIMETERS | |
|-----|--------|--------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.1102 | 0.1197 | 2.80 | 3.04 |
| B | 0.0472 | 0.0551 | 1.20 | 1.40 |
| C | 0.0350 | 0.0440 | 0.89 | 1.11 |
| D | 0.0150 | 0.0200 | 0.37 | 0.50 |
| G | 0.0701 | 0.0807 | 1.78 | 2.04 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0034 | 0.0070 | 0.085 | 0.177 |
| K | 0.0140 | 0.0285 | 0.35 | 0.69 |
| L | 0.0350 | 0.0401 | 0.89 | 1.02 |
| S | 0.0830 | 0.1039 | 2.10 | 2.64 |
| V | 0.0177 | 0.0236 | 0.45 | 0.60 |

- PIN 1. BASE
- 2. EMITTER
- 3. COLLECTOR



EMBOSSED TAPE AND REEL DATA FOR DISCRETES



| Size | A Max | G | T Max |
|------|--------------------|--|------------------|
| 8 mm | 330mm (12.992") | 8.4mm+1.5mm, -0.0 (.33"+.059", -0.00) | 14.4mm (.56") |

Reel Dimensions

Metric Dimensions Govern — English are in parentheses for reference only

Storage Conditions

Temperature: 5 to 40 Deg.C (20 to 30 Deg. C is preferred)

Humidity: 30 to 80 RH (40 to 60 is preferred)

Recommended Period: One year after manufacturing

(This recommended period is for the soldering condition only. The characteristics and reliabilities of the products are not restricted to this limitation)

Shipment Specification

