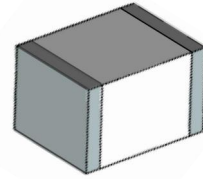


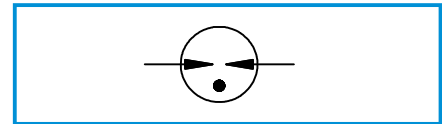
Gas Discharge Tube



Features

- Small Size Design EIA 1812 4.5×3.2×2.7mm
- Current Handling Capability 3,000A @ 8/20 μ s
- Low Capacitance and Insertion Loss
- Fast Response and Long Service Life
- Reliable to Protect Electrostatic Surge
- Moisture sensitivity level : Level 1

Functional Diagram



Applications

- Ethernet



Electrical Parameter

| | | | |
|---|---------------------------------------|------------------------------------|----|
| DC Breakdown Voltage ¹⁾²⁾ | 100V/s | 63-117 | V |
| Impulse Spark-over Voltage | At 1kV/μs | for 99 % of measured values≤650 | V |
| | At 1kV/μs | Typical values of distribution≤550 | V |
| Impulse Discharge Current ³⁾⁴⁾ | 8/20μs 10 operation[5×(+) & 5×(-)] | 3,000 | A |
| Arc Voltage | At 1A | ~10 | V |
| Insulation Resistance | DC=50V | ≥1 | GΩ |
| Capacitance at 1 MHz | VDC=0.5V | ≤0.5 | pF |
| Weight | | ~0.20 | g |
| Operating And Storage Temperature | | -40-125 | °C |
| Marking | | Without | |

1) At delivery AQL0.65level II ISO 2859

2) In ionized mode

3) Terms and waveforms in accordance with ITU-T Rec. K. 12; IEC 61643-21

4) After impulse discharge current test: DC breakdown voltage: 63-130

Part Numbering System

LT 091 N - H

(1) (2) (3) (4)

(1) Leading-ch Gas Discharge Tube

(2) Series: DC Breakdown Voltage, e.g.: 091=9×10¹=90V

(3) Tolerance of DC Breakdown Voltage, M=+-20%,

N=+-30%, the Specific tolerance is decided by the table of

“Electrical Parameter”

(4) "-H" denotes the higher impulse discharge current

Product Characteristics

| | |
|-----------------|-----------------------------|
| Lead Material | Copper or iron nickel alloy |
| Body Material | Ceramics |
| Terminal Finish | 100% Matte-Tin Plated |

Environmenta Reliability Characteristics

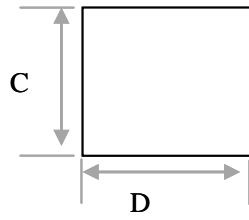
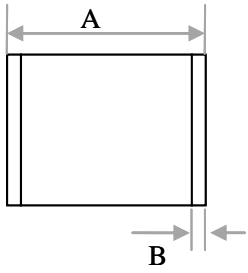
| Testing items | Technical standards |
|-------------------------------|---|
| High Temperature Storage Test | Temperature: 125°C Time: 2H |
| Low Temperature Storage Test | Temperature: -40°C Time: 2H |
| Vibration | Frequency: 10-500Hz Amplitude: 0.15mm Time: 45mins |
| Resistance of soldering heat | Temperature: 260±5°C Time of dip soldering: 10s, 1time |

Note: Up-screen program can be specified by customer's request via contacting Bencent service

Solderability test

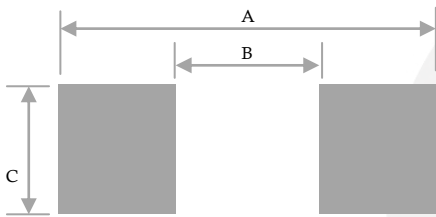
| | | |
|---------------|-------------------------|-------------|
| Solderability | Solder Pot Temperature: | 245°C ± 5°C |
| | Solder Dwell Time: | 4-6 seconds |

Package Outline



| REF | mm |
|-----|---------|
| A | 4.5±0.3 |
| B | 0.5±0.2 |
| C | 2.7±0.2 |
| D | 3.2±0.2 |

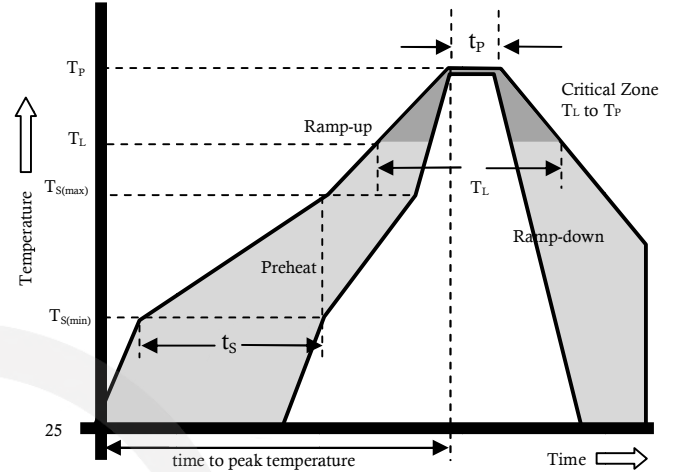
Suggested Pad Layout



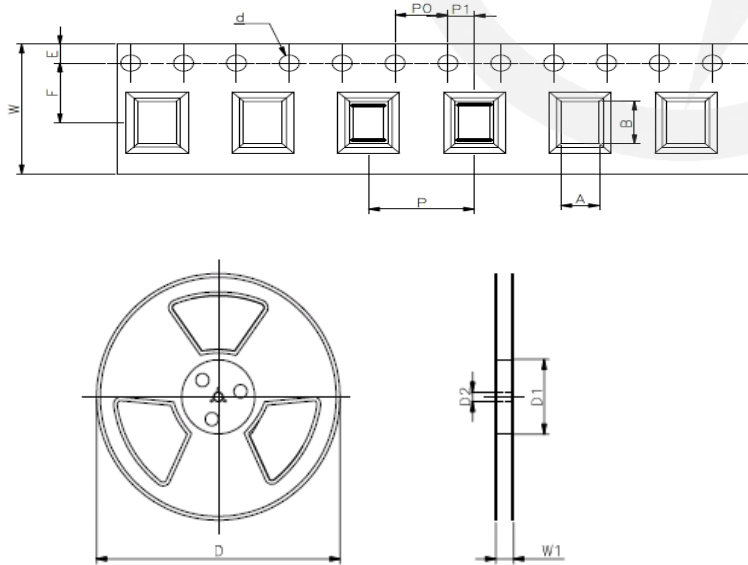
| REF | mm |
|-----|-----|
| A | 5.5 |
| B | 3.5 |
| C | 3.5 |

Reflow Profile

| Reflow Condition | | Pb-Free assembly |
|---|---|------------------|
| Pre Heat | Temperature Min | 150°C |
| | Temperature Max | 200°C |
| | Time (min to max) | 60 – 180 secs |
| Average ramp up rate (Liquids) T _{amp} (T _L) to peak | | 3°C/second max |
| T _S (max) to T _L - Ramp-up Rate | | 3°C/second max |
| Reflow | - Temperature (T _L) (Liquids) | 217°C |
| | - Temperature (T _L) | 60 – 150 seconds |
| Peak Temperature (T _p) | | 260+0/-5 °C |
| Time within 5°C of actual peak Temperature (t _p) | | 8 – 20 seconds |
| Ramp-down Rate | | 6°C/second max |
| Time 25°C to peak Temperature (T _p) | | 8 minutes Max. |
| Do not exceed | | 260°C |



Package Reel Information



| REF | mm | inch |
|-----|-----------|---------------|
| A | 3.7±0.2 | 0.146±0.008 |
| B | 5.0±0.1 | 0.197±0.004 |
| d | Φ 1.5±0.1 | Φ 0.059±0.004 |
| E | 1.75±0.1 | 0.069±0.004 |
| F | 5.5±0.1 | 0.217±0.002 |
| P | 8.0±0.1 | 0.315±0.004 |
| P0 | 4.0±0.1 | 0.157±0.004 |
| P1 | 2.0±0.1 | 0.079±0.004 |
| W | 12.0±0.2 | 0.472±0.008 |
| D | Φ330.0 | Φ13.0 |
| D1 | Φ50Min | Φ1.97Min |
| D2 | Φ13±0.15 | 0.512±0.006 |
| W1 | 16.8±2.0 | 0.661±0.079 |

| OUTLINE | REEL (PCS) | PER CARTON (PCS) | REEL DIAMETERS (mm) | CARTON SIZE(mm) | | |
|---------|------------|------------------|---------------------|-----------------|-----|-----|
| | | | | L | W | H |
| TAPING | 2,500 | 40,000 | 330 | 360 | 360 | 380 |