

Features

Miniaturized packaging size suitable for high-density applications:

nom 0.039" x 0.024" (1.0x0.6mm)

Standard Capacitance 20pF

Low Clamping Voltage: $V_C=10V@I_{PP}=8A$

Reverse Working (Stand-off) Voltage: 3.3V

Low Leakage current

Response Time is Typically < 1 ns



Applications

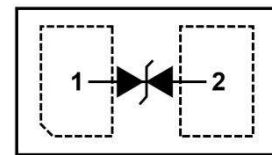
Smartphones, tablet computers

Blu-ray and DVD recorders and players

Video equipment and accessories



DFN1006-2L(Pb-Free)



Schematic Diagram

Absolute Maximum Rating

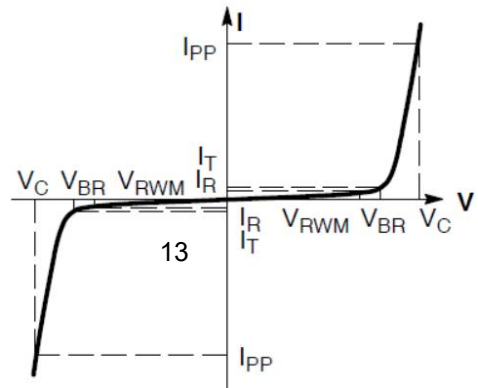
| Parameter | Symbol | Value | Unit |
|---------------------------------|-----------|----------|-------------|
| Peak Pulse Power (8/20 μ s) | P_{PK} | 100 | W |
| ESD per IEC 61000-4-2 (Air) | V_{ESD} | ± 30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Temperature Range | T_J | -55~150 | $^{\circ}C$ |
| Storage Temperature Range | T_{STG} | -55~150 | $^{\circ}C$ |

Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---------------------------|-----------|------------------------|-----|-----|-----|------|
| Reverse Stand-off Voltage | V_{RWM} | | | | 3.3 | V |
| Reverse Breakdown Voltage | VBR | $I_T=1mA$ | 3.5 | | 5 | V |
| Reverse Leakage Current | I_R | $V_{RWM}=3.3V$ | | | 500 | nA |
| Clamping Voltage | V_C | $I_{PP}=1A, tp=8/20us$ | | | 6.5 | V |
| | | $I_{PP}=8A, tp=8/20us$ | | | 10 | |
| Junction Capacitance | C_j | $V_R=0V, f=1MHz$ | | 15 | 20 | pF |

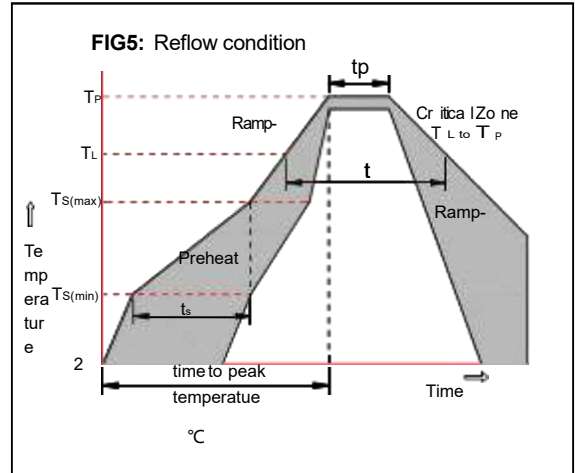
Electrical Parameters (TA = 25°C unless otherwise noted)

| 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} |
| I_T | Test Current |
| V_{BR} | Breakdown Voltage @ I_T |
| P_{PK} | Peak Power Dissipation |
| C | Max. CaPacitance @ $V_R = 0$ and freq.=1 MHz |



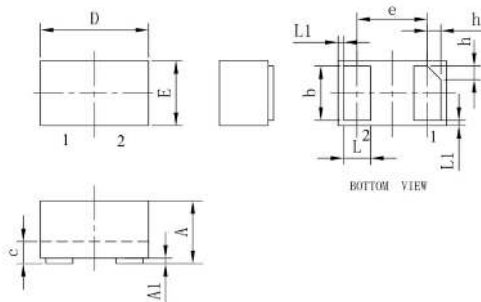
Soldering parameters

| Reflow Condition | | Pb-Free assembly (see as below) |
|---|-----------------------------------|------------------------------------|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max($T_{s(max)}$) | +200°C |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp (T_L) to peak) | | 3°C/sec. Max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/sec. Max |
| Reflow | -Temperature(T_L)(Liquid us) | +217°C |
| | -Temperature(t_L) | 60-150 secs. |
| Peak Temp (T_P) | | +260(+0/-5)°C |
| Time within 5°C of actual Peak Temp (t_p) | | 30 secs. Max |
| Ramp-down Rate | | 6°C/sec. Max |
| Time 25°C to Peak Temp (T_P) | | 8 min. Max |
| Do not exceed | | +260°C |



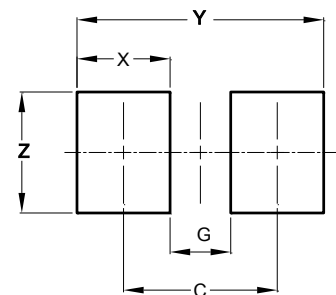
Package Dimensions & Suggested Pad Layout

DFN1006-2L



DFN1006-2L

| | Millimeters | | | Inches | | |
|----|-------------|-----------|-----------|-----------|-----------|-----------|
| | Min. (mm) | Typ. (mm) | Max. (mm) | Min. (mm) | Typ. (mm) | Max. (mm) |
| A | 0.45 | 0.50 | 0.55 | 0.018 | 0.020 | 0.022 |
| A1 | 0.00 | 0.02 | 0.05 | 0.000 | 0.001 | 0.002 |
| b | 0.45 | 0.50 | 0.55 | 0.018 | 0.020 | 0.022 |
| c | 0.12 | 0.15 | 0.18 | 0.005 | 0.006 | 0.007 |
| D | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| e | 0.59BSC | | | 0.026BSC | | |
| E | 0.55 | 0.60 | 0.65 | 0.022 | 0.024 | 0.026 |
| L | 0.25 | 0.30 | 0.35 | 0.010 | 0.012 | 0.013 |
| L1 | 0.05REF | | | 0.002REF | | |
| h | 0.07 | 0.12 | 0.17 | 0.003 | 0.005 | 0.007 |



| Dimensions | Value (in mm) |
|------------|---------------|
| C | 0.70 |
| G | 0.30 |
| X | 0.40 |
| Y | 1.10 |
| Z | 0.65 |

Tape & reel specification

| Tape | | Symbol | Dimension (mm) |
|-------------------|-----------|--------|----------------|
| | | P0 | 4.00±0.20 |
| | | P1 | 2.00±0.20 |
| | | P2 | 1.55±0.20 |
| | | D0 | 1.55±0.20 |
| | | D1 | 0.40±0.20 |
| | | E | 1.55±0.25 |
| | | F | 3.60±0.20 |
| | | W | 8.00±0.20 |
| | | A0 | 1.00±0.20 |
| | | B0 | 1.40±0.20 |
| | | K0 | 0.75±0.20 |
| | | T | 0.20±0.20 |
| | | D2 | 177.0±5.0 |
| | | D3 | 55Min. |
| | | D4 | R24.6±2.0 |
| G | R82.0±2.0 | | |
| I | 13.0±2.0 | | |
| W1 | 10.20±3.0 | | |
| Quantity: 3000PCS | | | |

7" Reel

