

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

ESDA05CP

Product specification

FEATURES

- Capacitance: 15pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): ± 25 KV
IEC 61000-4-2 (ESD Contact): ± 25 KV
IEC 61000-4-5 (Lightning 8/20 μ s): 8A


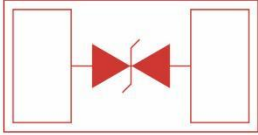

MACHANICAL DATA

- DFN1006-2L package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature solderin guaranteed: 260C/10s
- Reel size: 7 inch

APPLICATIONS

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

Reference News

| PACKAGE OUTLINE | PIN CONFIGURATION | Marking |
|---|---|---|
|  DFN1006-2L |  |  |

ABSOLUTE MAXIMUM RATING

| Symbol | Parameter | Conditions | Min | Max | Unit |
|--------|---------------------------------|----------------------------------|-----|-----|------|
| VESD | Electrostatic Discharge Voltage | IEC 61000-4-2; Contact Discharge | - | ±25 | V |
| | | IEC 61000-4-2; Air Discharge | - | ±25 | V |
| PPP | Peak Pulse Power | tP = 8/20 μs | - | 80 | W |
| IPPM | Rated Peak Pulse Current | tP = 8/20 μs | - | 8 | A |
| TA | Ambient Temperature Range | - | -55 | 125 | °C |
| Tstg | Storage Temperature Range | - | -55 | 150 | °C |

ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|--------|-------------------------|-----------------------|-----|------|-----|------|
| VRWM | Reverse Working Voltage | TA = 25 °C | - | - | 5.0 | V |
| VBR | Breakdown Voltage | IR = 1mA; TA = 25 °C | 5.6 | 6.5 | 8.4 | V |
| IR | Reverse Leakage Current | VRWM = 5V; TA = 25 °C | - | - | 0.1 | A |
| VC | Clamping Voltage | IPP=1A, tP =8/20μs | - | - | 6 | V |
| | | IPP=8A, tP =8/20μs | - | - | 10 | V |
| CJ | Junction Capacitance | VR = 0V, f = 1 MHz | - | 15 | 18 | F |

ELECTRICAL CHARACTERISTICS CURVE

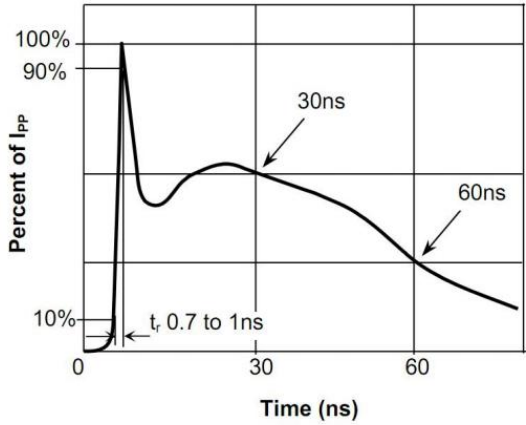


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

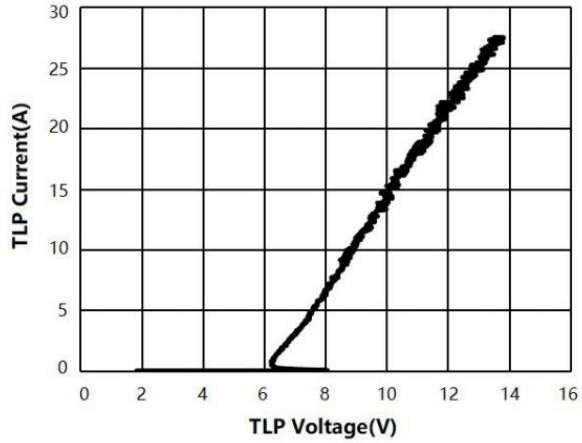


Fig.2 Transmission Line Pulse (TLP)

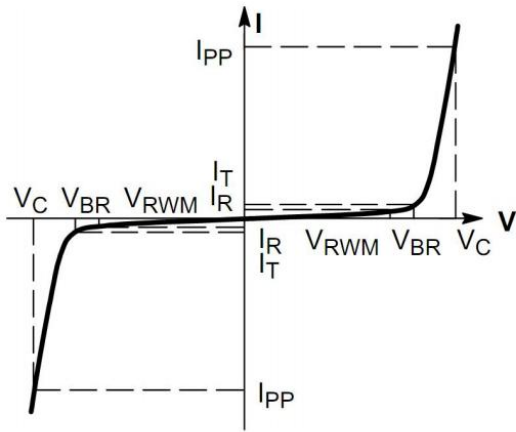


Fig.3 V-I Characteristics for Bidirectional Diode

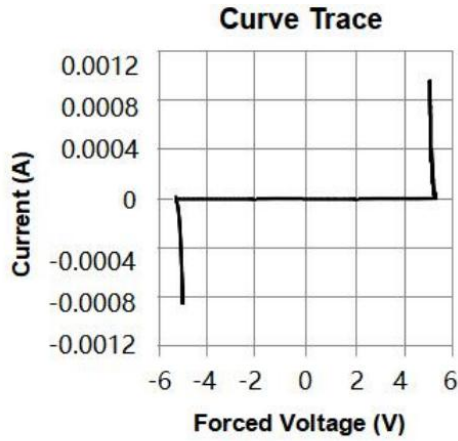


Fig.4 IV Curve

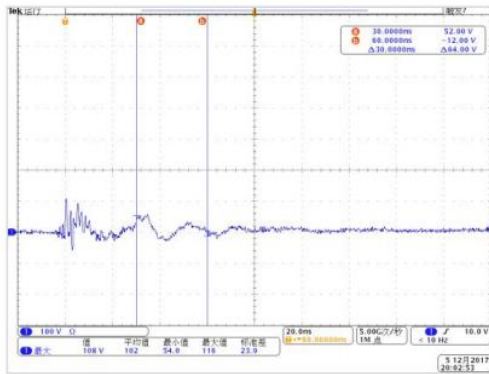


Fig.5 Clamping Voltage at IEC61000-4-2
+8kV Pulse Waveform

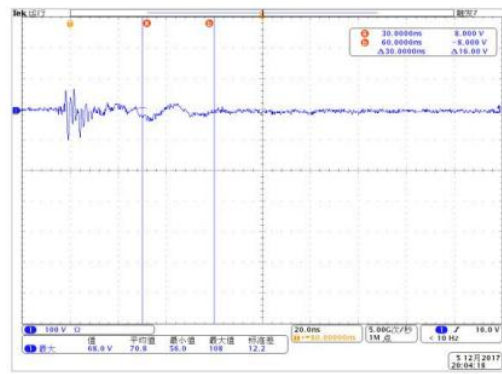
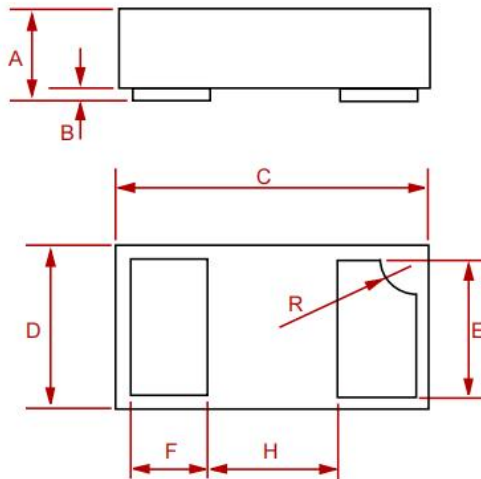


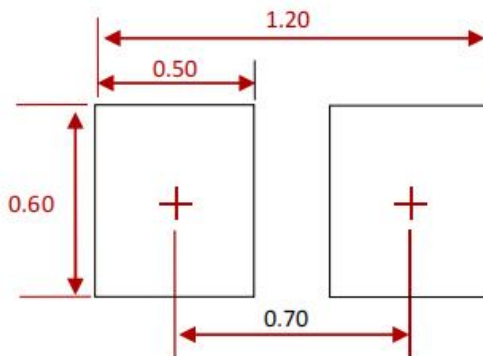
Fig.6 Clamping Voltage at IEC61000-4-2
-8kV Pulse Waveform

PACKAGE MECHANICAL DATA



| Dim | Inches | | Millimeters | |
|-----|-----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.0125 | 0.02 | 0.32 | 0.52 |
| B | 0.000 | 0.002 | 0.00 | 0.05 |
| C | 0.037 | 0.043 | 0.95 | 1.080 |
| D | 0.022 | 0.027 | 0.55 | 0.680 |
| E | 0.016 | 0.024 | 0.40 | 0.60 |
| F | 0.008 | 0.012 | 0.20 | 0.30 |
| H | 0.015Typ. | | 0.40Typ. | |
| R | 0.001 | 0.005 | 0.05 | 0.15 |

Suggested Pad Layout



NOTES:

- 1.CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
- 2.THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

| P/N | PKG | QTY |
|----------|-----------|-------|
| ESDA05CP | DFN1006-L | 10000 |

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