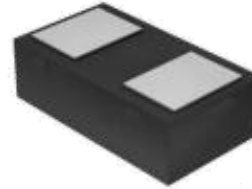


1. Features

- Ultra Low Capacitance: 0.35pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): ± 20 kV
IEC 61000-4-2 (ESD Contact): ± 20 kV
IEC 61000-4-5 (Lightning 8/20 μ s): 4.5A

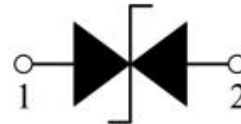
2. Pin Description



3. Applications

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

4. Schematic Diagram



5. Order Information

| Type | Package | Size (mm) | Delivery Form | Delivery Quantity |
|------------|---------|----------------|---------------|-------------------|
| MKT312U035 | DFN1006 | 1.00x0.60x0.37 | 7" T&R | 10,000 |

6. Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

| Symbol | Parameter | Conditions | Min | Max | Unit |
|-----------|---------------------------------|----------------------------------|-----|----------|------------------|
| V_{ESD} | Electrostatic Discharge Voltage | IEC 61000-4-2; Contact Discharge | - | ± 20 | kV |
| | | IEC 61000-4-2; Air Discharge | - | ± 20 | kV |
| P_{PP} | Peak Pulse Power | $t_p = 8/20\ \mu\text{s}$ | - | 100 | W |
| I_{PPM} | Rated Peak Pulse Current | $t_p = 8/20\ \mu\text{s}$ | - | 4.5 | A |
| T_A | Operating Temperature Range | - | -55 | 125 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | - | -55 | 150 | $^\circ\text{C}$ |

7. Electrical Characteristics($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|-----------|-------------------------|--|-----|------|------|---------------|
| V_{RWM} | Reverse Working Voltage | $T_A = 25\text{ }^\circ\text{C}$ | - | - | 5.0 | V |
| V_{BR} | Breakdown Voltage | $I_R = 1\text{ mA}; T_A = 25\text{ }^\circ\text{C}$ | 6.0 | 8.5 | 9.5 | V |
| I_R | Reverse Leakage Current | $V_{RWM} = 5\text{ V}; T_A = 25\text{ }^\circ\text{C}$ | - | - | 0.1 | μA |
| V_C | Clamping Voltage | $I_{PP} = 1\text{ A}, t_p = 8/20\mu\text{s}$ | - | - | 11 | V |
| | | $I_{PP} = 4.5\text{ A}, t_p = 8/20\mu\text{s}$ | - | - | 22 | V |
| C_J | Junction Capacitance | $V_R = 0\text{ V}, f = 1\text{ MHz}$ | - | 0.35 | 0.45 | pF |

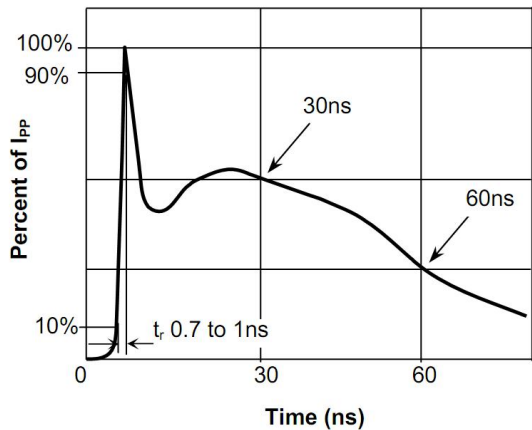
8. Typical Characteristics


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

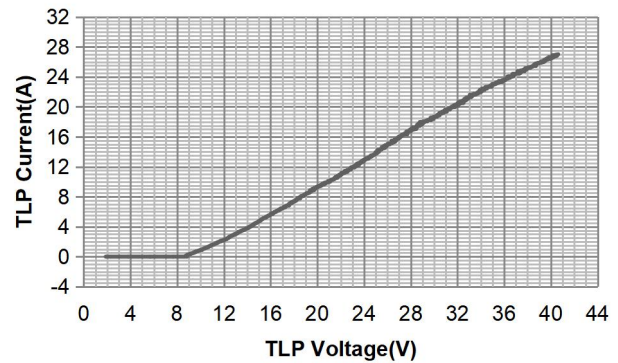


Fig.2 Transmission Line Pulse (TLP)

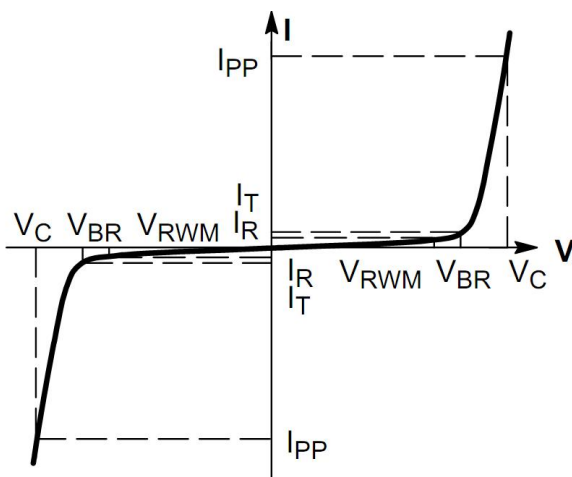


Fig.3 V-I Characteristics for Bidirectional Diode

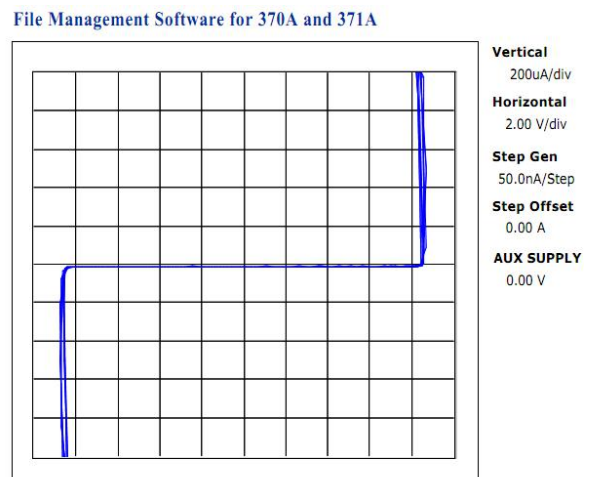
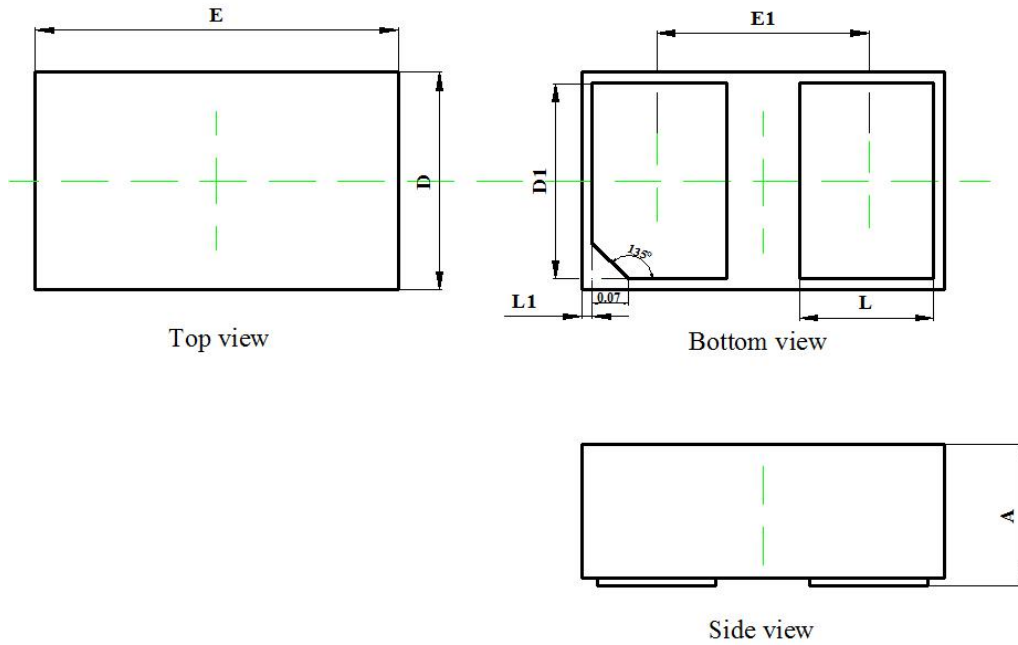


Fig.4 IV Curve

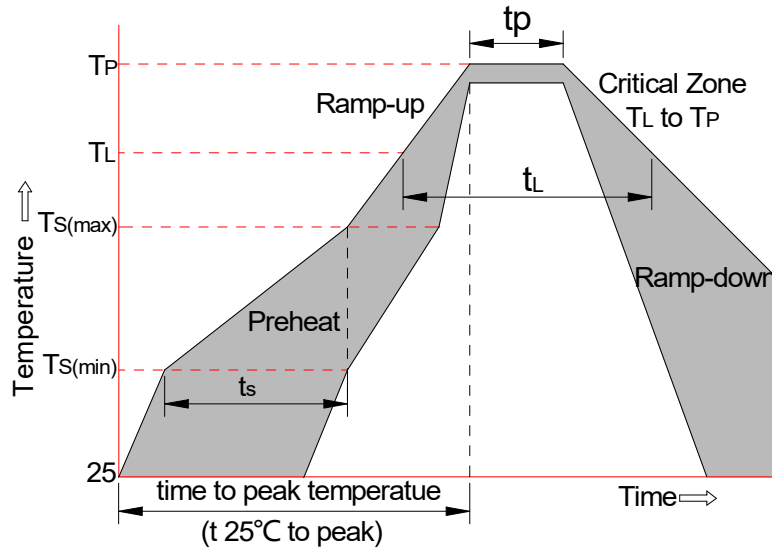
9. Package Dimension

DFN1006 Package Outline



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|-----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.350 | 0.450 | 0.014 | 0.018 |
| D | 0.550 | 0.650 | 0.022 | 0.026 |
| E | 0.950 | 1.050 | 0.037 | 0.041 |
| D1 | 0.420 | 0.520 | 0.017 | 0.020 |
| E1 | 0.550 | 0.650 | 0.022 | 0.026 |
| L | 0.270 | 0.370 | 0.011 | 0.015 |
| L1 | 0.000 | 0.100 | 0.000 | 0.004 |

10. Soldering Parameters



| Reflow Condition | | Pb-Free Assembly |
|---|-----------------------------------|------------------|
| Pre-heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max($T_{s(max)}$) | +200°C |
| | -Time (Min to Max) (t_s) | 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 |
| xTime 25°C to Peak Temp (T_p) | | 8 min. Max |
| Do not exceed | | +260°C |

11. Contact Information

Online product information is available at www.mkfounder.com

Buy our products or get free samples, for further information and requests,

e-mail us at: sales@mkfounder.com

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13. Reversion History

| Document ID | Release Date | Sheet Status | Change Notice | Supersedes |
|-------------|--------------|-------------------|---|------------|
| 0.1 | 08-Mar-2018 | Product datasheet | - | - |
| 0.2 | 11-Jun-2018 | Product datasheet | Change I _{PP} 、P _{PP} | - |
| 0.3 | 14-Aug-2018 | Product datasheet | Change Dimension | - |

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