

## / Descriptions

DFN1006-2L ESD

DFN1006-2L Plastic Package 1-Line,Bi-directional , ESD Protection Diode.

## / Features

1ns

20KV

IEC61000-4-2

4

ESD

AEC-Q101

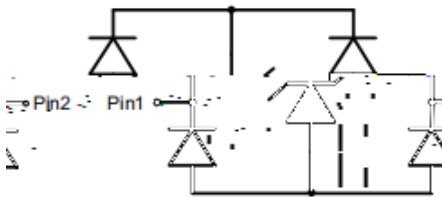
Ultra small package, Response Time is Typically<1ns, ESD>20kV per Human Body Model,IEC61000-4-2 Level 4 ESD Protection,Qualified to AEC-Q101 Standards for High Reliability, HF Product.

## / Applications

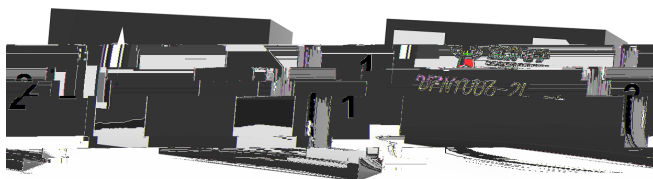
MP3

Suitable for cellular phones audio,MP3 players, Digital cameras, Portable devices, mobile telephone and other users, Meet the stringent requirements of automotive applications.

## / Equivalent Circuit



## / Pinning



## / Marking

See Marking Instructions.

| Parameter                                       | Symbol    | Rating   | Unit |
|-------------------------------------------------|-----------|----------|------|
| Peak Pulse Power( $t_p = 8/20\mu s$ )           | $P_{PK}$  | 60       | W    |
| Peak Pulse Current( $t_p = 8/20\mu s$ )         | $I_{PP}$  | 3.5      | A    |
| ESD according to IEC61000-4-2 air discharge     | $V_{ESD}$ | $\pm 20$ | KV   |
| ESD according to IEC61000-4-2 contact discharge |           | $\pm 15$ |      |
| Junction temperature                            | $T_J$     | -55~+125 |      |
| Storage Temperature                             | $T_{STG}$ | -55~+150 |      |

| Parameter                               | Symbol    | Test Conditions                       | Min | Typ | Max | Unit |
|-----------------------------------------|-----------|---------------------------------------|-----|-----|-----|------|
| Reverse maximum working voltage         | $V_{RWM}$ |                                       |     |     | 3.3 | V    |
| Reverse leakage current                 | $I_R$     | $V_{RWM} = 3.3V$                      |     |     | 100 | nA   |
| Reverse breakdown voltage <sup>1)</sup> | $V_{BR}$  | $I_T = 1mA$                           | 4.2 |     |     | V    |
| Clamping voltage                        | $V_C$     | $I_{PP} = 3.5A \quad t_p = 8/20\mu s$ |     | 15  |     | V    |
| Clamping voltage(TLP)                   |           | $I_{PP} = 16A \quad T_p = 100ns$      |     |     | 15  | V    |
| Dynamic Resistance                      | $R_{dyn}$ | $T_P$                                 |     |     |     |      |

/ Electrical Characteristic Curve( $T_a=25^\circ\text{C}$ )

Fig.1 Peak Pulse Power Rating Curve

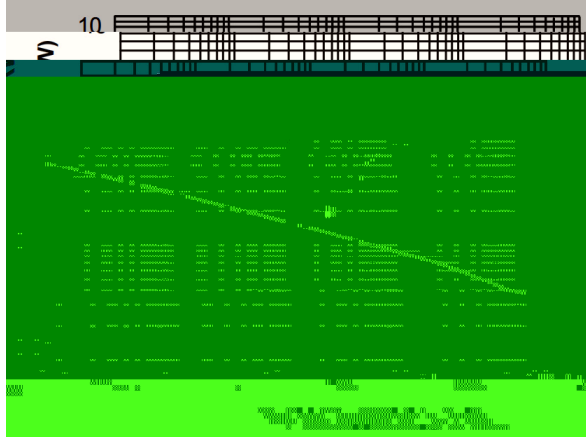


Fig.2 Pulse Derating Curve

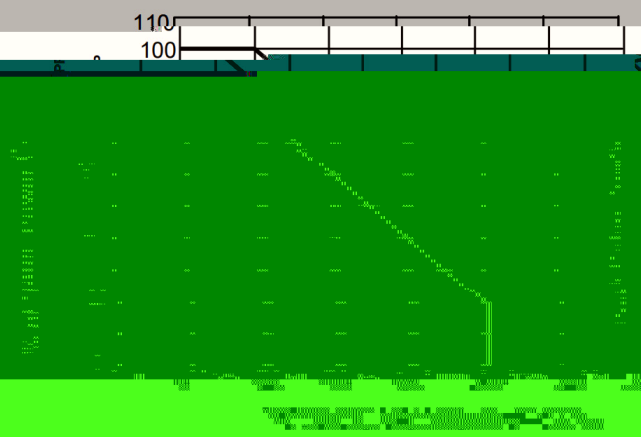


Fig.3 Pulse Waveform-8/20μs

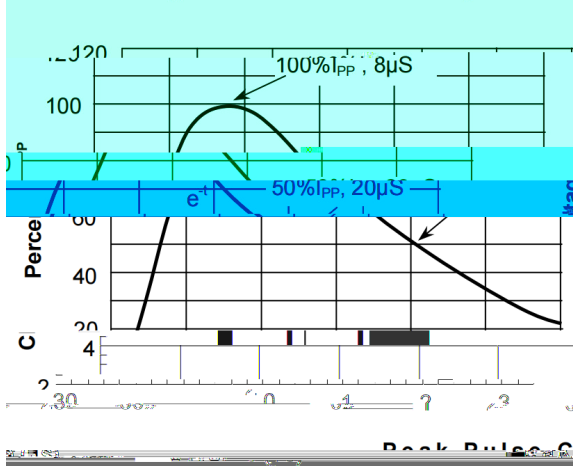


Fig.4 Clamping Voltage vs. Ipp

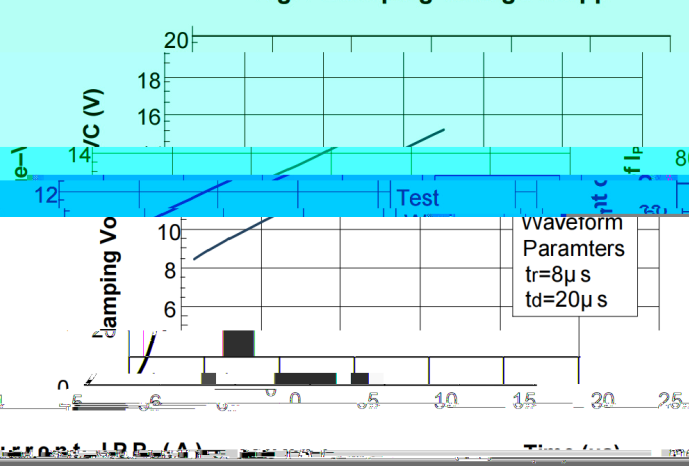


Figure5. Positive Clamping voltage (TID)

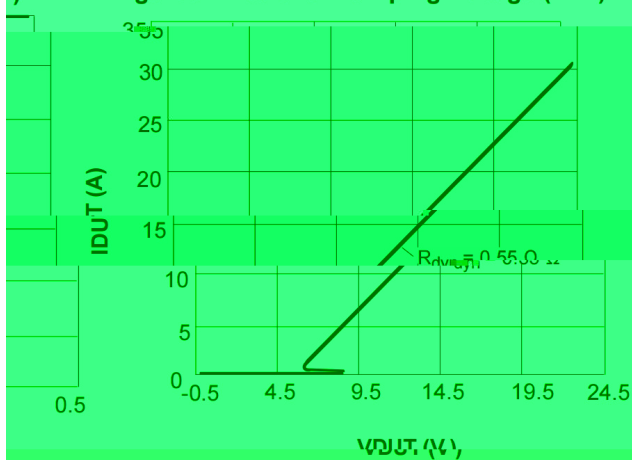
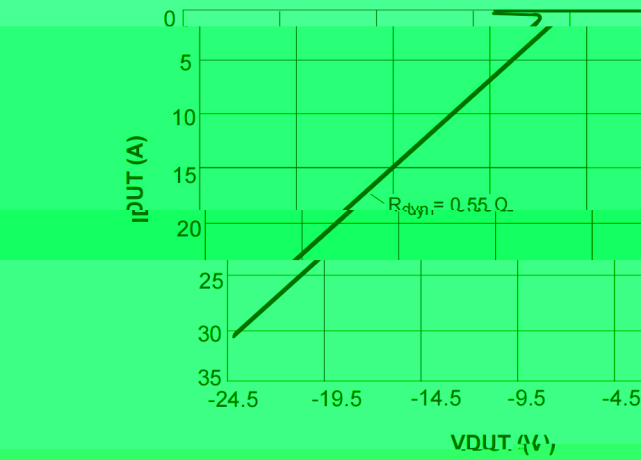
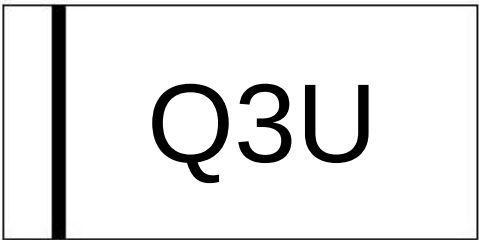


Figure6. Negative Clamping voltage (TID)





/ Marking Instructions



Q  
3U

Note

|    |                                      |
|----|--------------------------------------|
| Q  | Automobile halogen-free product Code |
| 3U | Product Type Code                    |

( ) /

|     |  |
|-----|--|
| 350 |  |
| 300 |  |
| 250 |  |
| 200 |  |
| 150 |  |
| 100 |  |
| 50  |  |
| 0   |  |

Note:

- |   |         |            |                                         |
|---|---------|------------|-----------------------------------------|
| 1 | 150 200 | 60 120sec; | 1.Preheating:150~200 , Time:60~120sec.  |
| 2 | 255±5   | 5±0.5sec;  | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | 2 10    | /sec.      | 3. Cooling Speed: 2~10 /sec.            |

## / Resistance to Soldering Heat Test Conditions

|       |           |             |               |
|-------|-----------|-------------|---------------|
| 260±5 | 10±1 sec. | Temp.:260±5 | Time:10±1 sec |
|-------|-----------|-------------|---------------|

## / Packaging SPEC.

/ REEL

| Package Type | Units  |    |         |   |         | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|--------|----|---------|---|---------|-----------------------------------|-------------|-------------|
|              |        |    |         |   |         |                                   |             |             |
| DFN1006-2L   | 10,000 | 10 | 100,000 | 6 | 600,000 | 7 ×8                              | 180×120×180 | 390×385×205 |

## / Notices