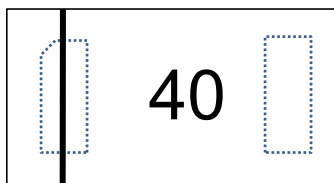
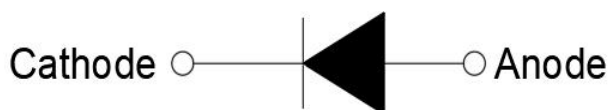


### Features

- Small Surface Mounting Type
- Ideal for Automated Placement
- Ultrafast Reverse Recovery Time
- Low Power Losses, High Efficiency
- Low Forward Voltage Drop
- High Surge Capability
- RoHS Compliant

### Appearance & Symbo



40=Marking Code

### Mechanica Characteristics

- Package: DFN1006-2L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel :10000pcs

### Applications

- Low Voltage
- High-Frequency Inverters
- Free Wheeling
- Polarity Protection

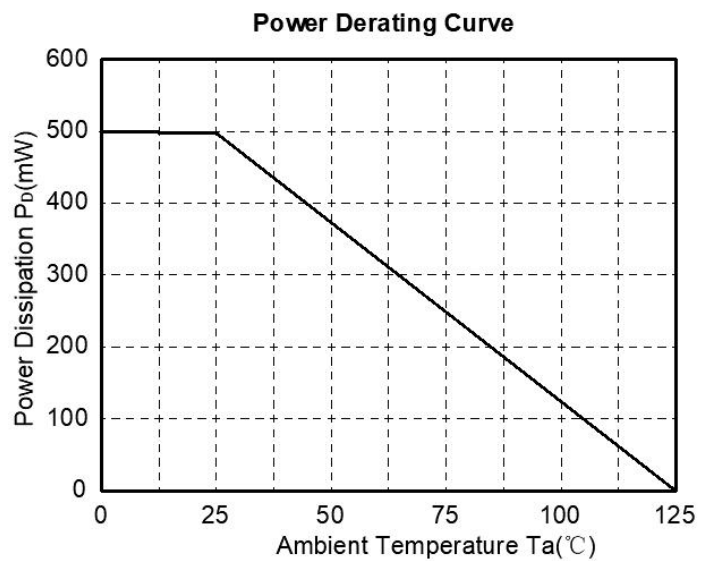
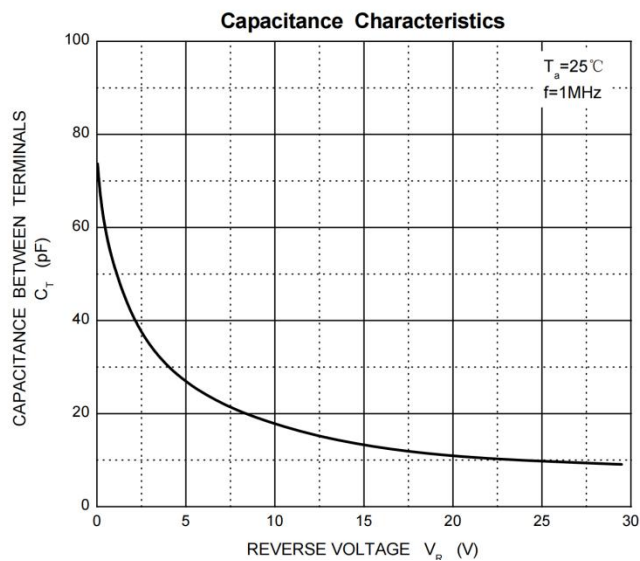
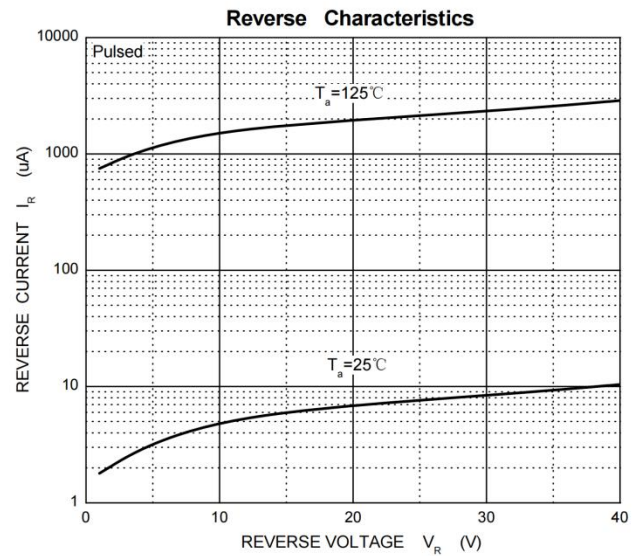
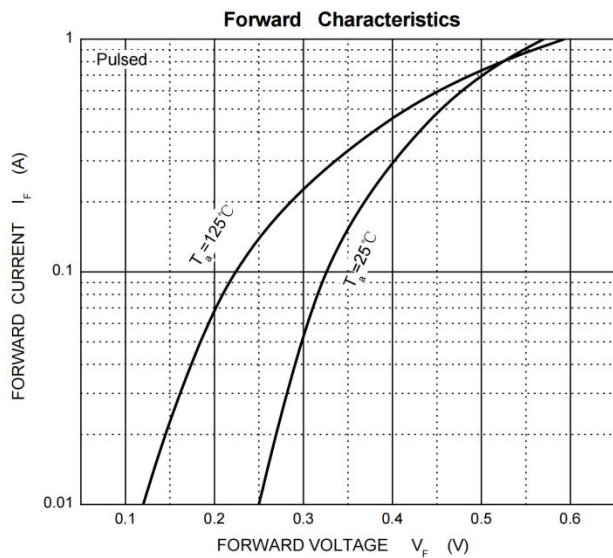
Absolute Maximum Ratings (T=25°C, RH=45%-75%, unless otherwi

| Parameters                                        | Symbol          | Value      | Unit |
|---------------------------------------------------|-----------------|------------|------|
| Reverse Voltage (Repetitive Peak)                 | $V_{RRM}$       | 40         | V    |
| Reverse Voltage (RMS)                             | $V_{R(RMS)}$    | 32         | V    |
| DC Blocking Voltage                               | $V_R$           | 40         | V    |
| Average Rectified Output Current                  | $I_O$           | 1          | A    |
| Non-repetitive Peak Forward Surge Current@t=8.3ms | $I_{FSM}$       | 7          | A    |
| Power Dissipation                                 | $P_D$           | 500        | mW   |
| Thermal Resistance Junction to Ambient(Typ)       | $R_{\theta JA}$ | 120        | °C/W |
| Junction Temperature                              | $T_J$           | -55 ~ +125 | °C   |
| Storage Temperature                               | $T_{STG}$       | -55 ~ +150 | °C   |

Electrical Characteristics (T=25°C, RH=45%-75%, unless otherwise noted

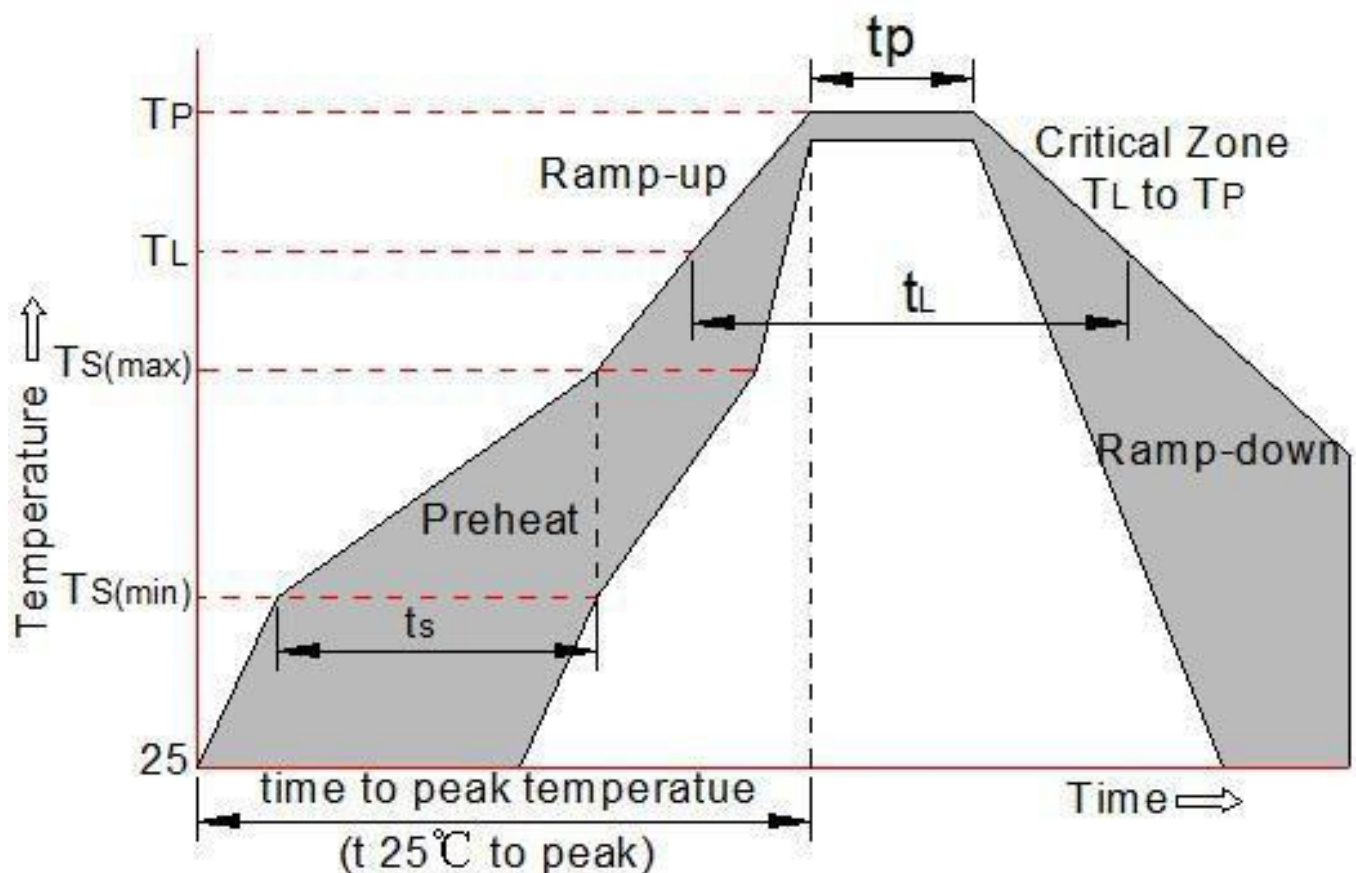
| Parameter         | Symbol   | Test Condition   | Min | Typ | Max  | Unit |
|-------------------|----------|------------------|-----|-----|------|------|
| Breakdown Voltage | $V_{BR}$ | $I_R=1mA$        | 40  |     |      | V    |
| Reverse Current   | $I_R$    | $V_R=40V$        |     | 10  | 40   | uA   |
| Forward Voltage   | $V_F$    | $I_F=100mA$      |     |     | 0.38 | V    |
|                   |          | $I_F=200mA$      |     |     | 0.40 |      |
|                   |          | $I_F=500mA$      |     |     | 0.49 |      |
|                   |          | $I_F=700mA$      |     |     | 0.55 |      |
|                   |          | $I_F=1A$         |     |     | 0.61 |      |
| Total Capacitance | $C_T$    | $V_R=0V, f=1MHz$ |     | 75  | 120  | pF   |

## Typical Characteristics

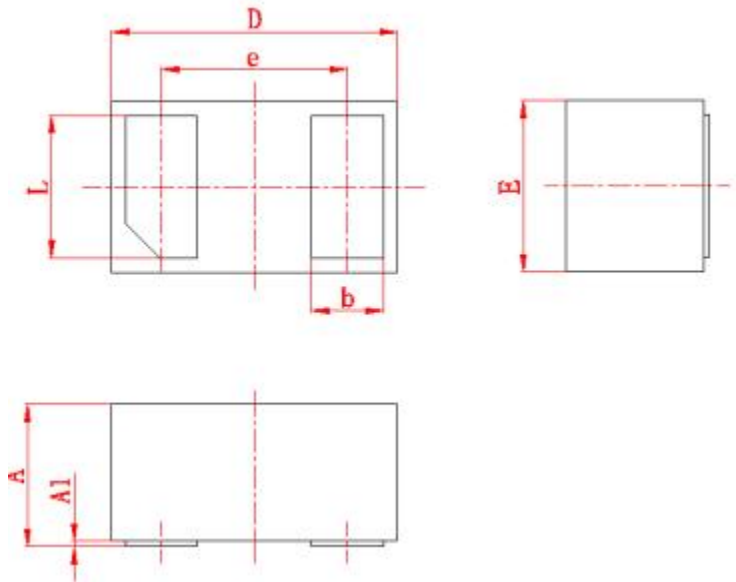


#### Soldering parameters

| Reflow Condition                                        |                                   | Pb-Free assembly<br>see as bellow |
|---------------------------------------------------------|-----------------------------------|-----------------------------------|
| 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                      |
| Time 25°C to Peak Temp ( $T_p$ )                        |                                   | 8 min. Max                        |
| Do not exceed                                           |                                   | +260°C                            |

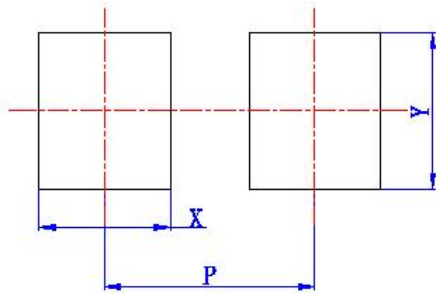


Package mechanical data



| Symbol | Dimension in Millimeters |      |
|--------|--------------------------|------|
|        | min                      | max  |
| A      | 0.4                      | 0.5  |
| A1     | 0                        | 0.05 |
| D      | 0.9                      | 1.1  |
| E      | 0.55                     | 0.65 |
| e      | (0.65)                   |      |
| b      | 0.2                      | 0.3  |
| L      | 0.34                     | 0.55 |

Suggested Land Pattern



| Symbol | Dimension in Millimeters |
|--------|--------------------------|
|        | typ                      |
| X      | (0.5)                    |
| Y      | (0.7)                    |
| P      | (0.8)                    |

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