

## Features

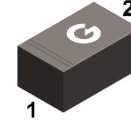
- Low turn-on voltage
- Fast switching
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF

## Mechanical Data

- Case: DFN1006-2
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Cathode Anode  
1 2



DFN1006-2

## Ordering Information

| Part Number | Package   | Shipping Quantity       | Marking Code |
|-------------|-----------|-------------------------|--------------|
| TBAS40L     | DFN1006-2 | 10000 pcs / Tape & Reel | 43           |

## Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

| Parameter                                                | Symbol             | Value | Unit |
|----------------------------------------------------------|--------------------|-------|------|
| Peak Repetitive Reverse Voltage                          | V <sub>RRM</sub>   | 40    | V    |
| Working Peak Reverse Voltage                             | V <sub>RWM</sub>   | 40    | V    |
| DC Reverse Voltage                                       | V <sub>R</sub>     | 40    | V    |
| Maximum Average Forward Output Current                   | I <sub>F(AV)</sub> | 0.2   | A    |
| Peak Forward Surge Current (8.3ms single half sine-wave) | I <sub>FSM</sub>   | 0.6   | A    |

## Thermal Characteristics

| Parameter                                 | Symbol           | Value      | Unit |
|-------------------------------------------|------------------|------------|------|
| Power Dissipation (T <sub>A</sub> = 25°C) | P <sub>D</sub>   | 100        | mW   |
| Thermal Resistance Junction-to-Air        | R <sub>θJA</sub> | 1000       | °C/W |
| Operating junction Temperature            | T <sub>J</sub>   | -55 ~ +125 | °C   |
| Storage Temperature Range                 | T <sub>STG</sub> | -55 ~ +150 | °C   |

## Electrical Characteristics (@ T<sub>A</sub> = 25°C unless otherwise specified)

| Parameter                     | Symbol          | Test Condition                                                | Min. | Typ. | Max. | Unit |
|-------------------------------|-----------------|---------------------------------------------------------------|------|------|------|------|
| Forward Voltage               | V <sub>F</sub>  | I <sub>F</sub> = 1mA                                          | -    | -    | 0.38 | V    |
|                               |                 | I <sub>F</sub> = 10mA                                         | -    | -    | 0.65 | V    |
|                               |                 | I <sub>F</sub> = 40mA                                         | -    | -    | 1.00 | V    |
| Maximum Peak Reverse Current  | I <sub>R</sub>  | V <sub>R</sub> = 30V                                          | -    | -    | 0.2  | μA   |
| Capacitance Between Terminals | C <sub>T</sub>  | V <sub>R</sub> = 0V, f = 1MHz                                 | -    | 2.5  | 5    | pF   |
| Reverse Recovery Time         | t <sub>rr</sub> | I <sub>F</sub> = I <sub>R</sub> = 10mA, R <sub>L</sub> = 100Ω | -    | -    | 5    | ns   |

Ratings and Characteristics Curves (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

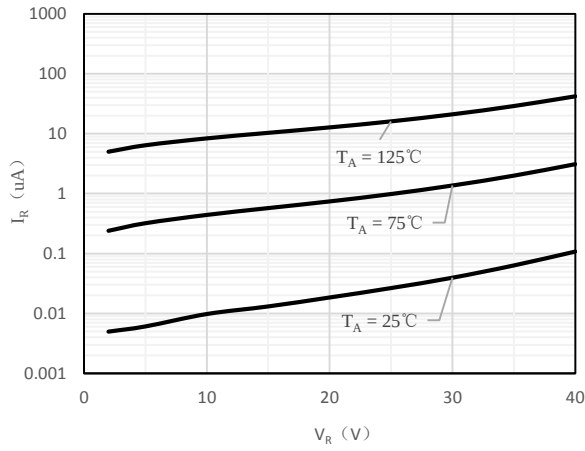


Fig 1 Typical Reverse Characteristic

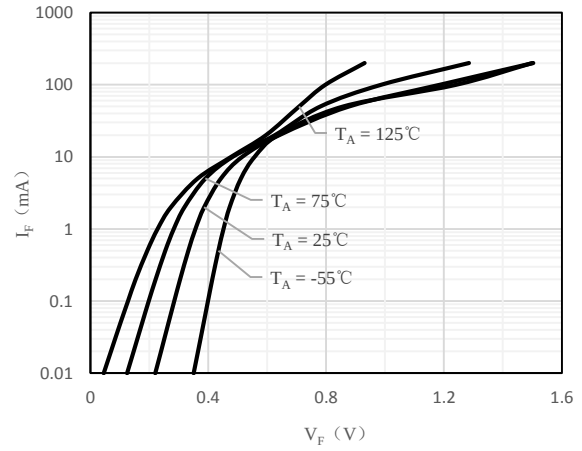


Fig 2 Typical Forward Characteristics

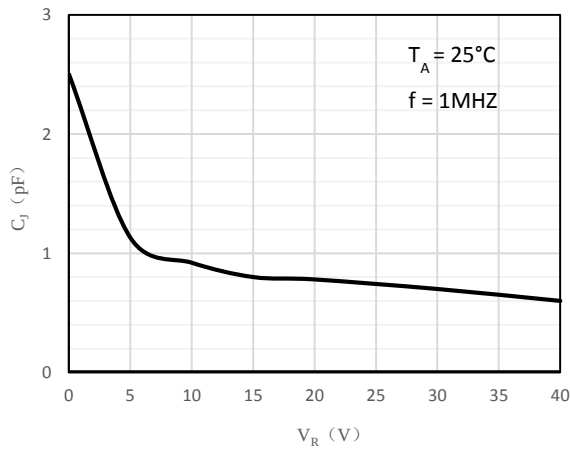


Fig 3 Capacitance Characteristics

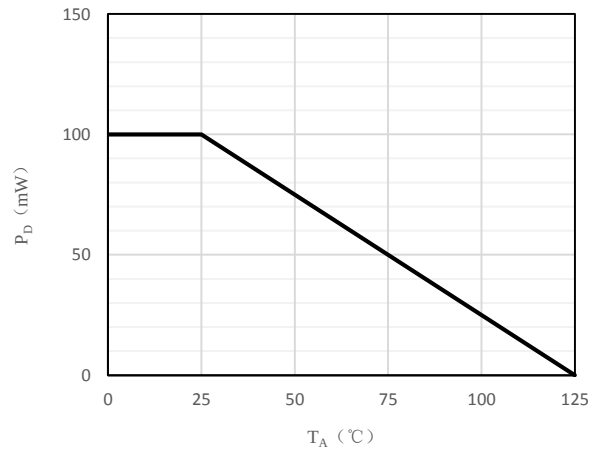
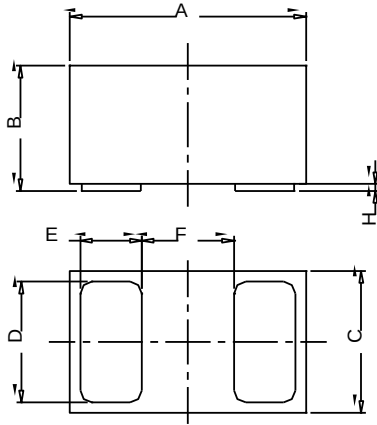


Fig 4 Steady State Power Derating

## Package Outline Dimensions (Unit: mm)



| DFN1006-2 |      |      |       |
|-----------|------|------|-------|
| Dimension | Min. | Typ. | Max.  |
| A         | 0.95 | 1.00 | 1.075 |
| B         | 0.45 | 0.50 | 0.55  |
| C         | 0.55 | 0.60 | 0.675 |
| D         | 0.45 | 0.50 | 0.55  |
| E         | 0.20 | 0.25 | 0.30  |
| F         | -    | 0.40 | -     |
| H         | 0    | 0.03 | 0.05  |

## Mounting Pad Layout (Unit: mm)

### DFN1006-2

