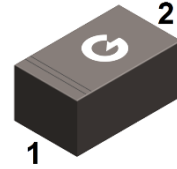


## Features

- Repetitive peak forward current
- High switching speed
- Continuous reverse voltage
- Repetitive peak reverse voltage

HF

1 CATHODE 2 ANODE



DFN1006-2

## Mechanical Data

- Case: DFN1006-2
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

## Ordering Information

| Part Number | Package   | Shipping Quantity       | Marking Code |
|-------------|-----------|-------------------------|--------------|
| BAS16L      | DFN1006-2 | 10000 pcs / Tape & Reel | A6           |

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

| Parameter                                             | Symbol              | Value | Unit |
|-------------------------------------------------------|---------------------|-------|------|
| Non-Repetitive Peak Reverse Voltage                   | V <sub>RM</sub>     | 100   | V    |
| Peak Repetitive Peak Reverse Voltage                  | V <sub>RRM</sub>    | 100   | V    |
| Working Peak Reverse Voltage                          | V <sub>RWM</sub>    | 100   | V    |
| DC Blocking Voltage                                   | V <sub>R</sub>      | 100   | V    |
| RMS Reverse Voltage                                   | V <sub>R(RMS)</sub> | 75    | V    |
| Average Rectified Output Current                      | I <sub>F</sub>      | 215   | mA   |
| Peak Forward Surge Current, 1μs Single Half-sine-wave | I <sub>FSM</sub>    | 4     | A    |
| Peak Forward Surge Current, 1ms Single Half-sine-wave | I <sub>FSM</sub>    | 1     | A    |
| Peak Forward Surge Current, 1s Single Half-sine-wave  | I <sub>FSM</sub>    | 0.5   | A    |

## Thermal Characteristics

| Parameter                                         | Symbol           | Value      | Unit |
|---------------------------------------------------|------------------|------------|------|
| Power Dissipation                                 | P <sub>D</sub>   | 250        | mW   |
| Thermal Resistance Junction-to-Air <sup>*1</sup>  | R <sub>θJA</sub> | 162        | °C/W |
| Thermal Resistance Junction-to-Case <sup>*1</sup> | R <sub>θJC</sub> | 85         | °C/W |
| Thermal Resistance Junction-to-Lead <sup>*1</sup> | R <sub>θJL</sub> | 160        | °C/W |
| Operating Junction Temperature Range              | T <sub>J</sub>   | -55 ~ +150 | °C   |
| Storage Temperature Range                         | T <sub>STG</sub> | -55 ~ +150 | °C   |

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

| Parameter                    | Symbol   | Test Condition                                                          | Min. | Typ. | Max.  | Unit          |
|------------------------------|----------|-------------------------------------------------------------------------|------|------|-------|---------------|
| Forward Voltage              | $V_F$    | $I_F = 1\text{mA}$                                                      | -    | -    | 0.715 | V             |
|                              |          | $I_F = 10\text{mA}$                                                     | -    | -    | 0.855 | V             |
|                              |          | $I_F = 50\text{mA}$                                                     | -    | -    | 1.000 | V             |
|                              |          | $I_F = 150\text{mA}$                                                    | -    | -    | 1.250 | V             |
| Maximum Peak Reverse Current | $I_R$    | $V_R = 25\text{V}$                                                      | -    | -    | 30    | nA            |
|                              |          | $V_R = 75\text{V}$                                                      | -    | -    | 1     | $\mu\text{A}$ |
|                              |          | $V_R = 25\text{V}, T_J = 150^\circ\text{C}$                             | -    | -    | 30    | $\mu\text{A}$ |
|                              |          | $V_R = 75\text{V}, T_J = 150^\circ\text{C}$                             | -    | -    | 50    | $\mu\text{A}$ |
| Total Capacitance            | $C_J$    | $V_R = 0\text{V}, f = 1.0\text{MHz}$                                    | -    | -    | 1.5   | pF            |
| Reverse Recovery Time        | $t_{rr}$ | $I_F = I_R = 10\text{mA}$<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ | -    | -    | 4     | ns            |

Note 1: The data tested by surface mounted on a 18mm \* 15mm \* 1mm FR4-epoxy P.C.B

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

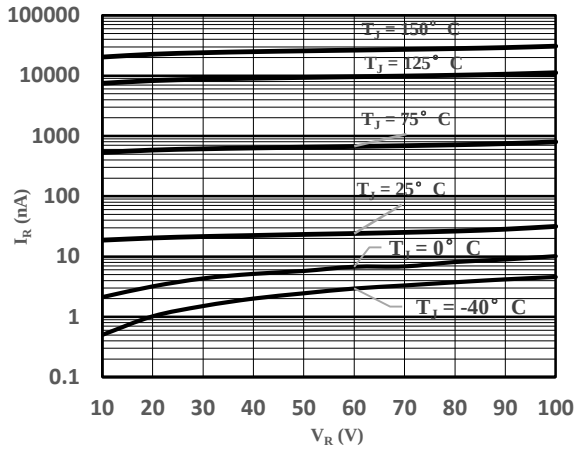


Fig 1 Typical Reverse Characteristic

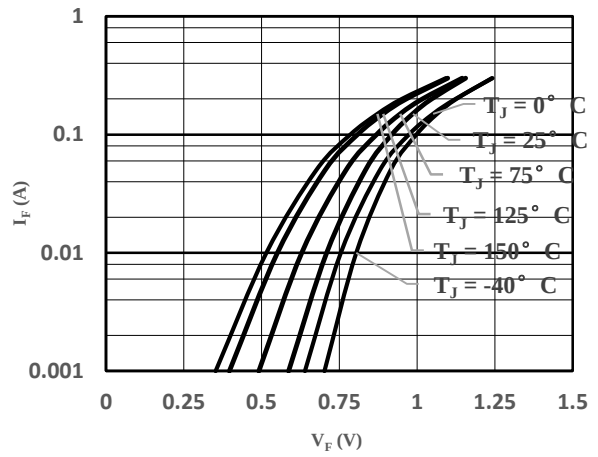


Fig 2 Typical Forward Characteristics

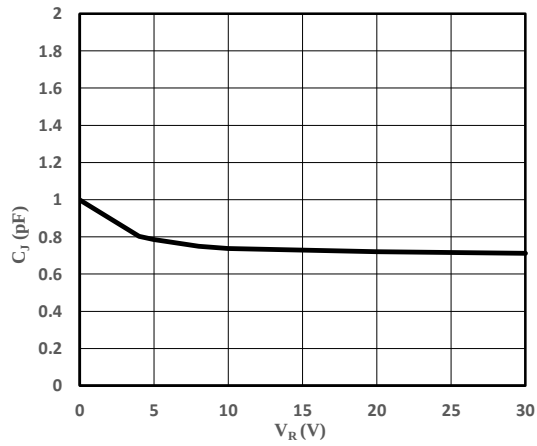
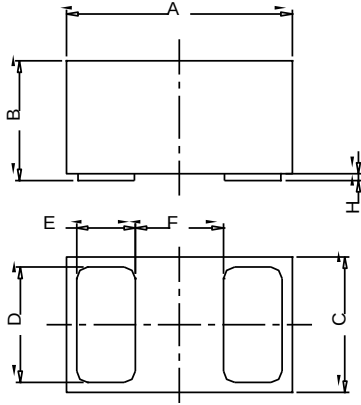


Fig 3 Capacitance vs. Reverse Voltage

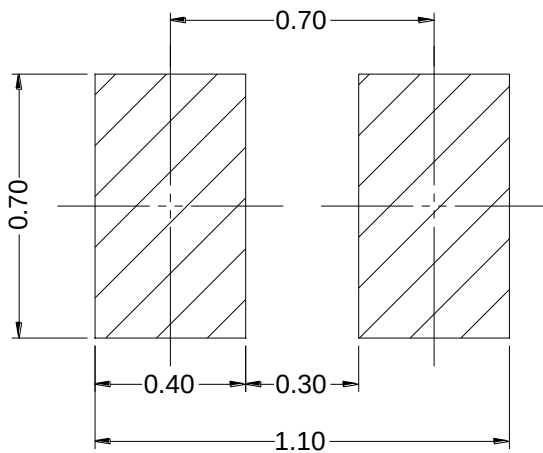
## Package Outline Dimensions (Unit: mm)



| DFN1006-2 |      |      |       |
|-----------|------|------|-------|
| Dimension | Min. | Typ. | Max.  |
| A         | 0.95 | 1.00 | 1.075 |
| B         | 0.47 | 0.50 | 0.53  |
| 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  |

## Package Outline Dimensions (Unit: mm)

### DFN1006-2



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