

**Features**

- Low reverse leakage
- Low forward voltage
- Low profile



DFN1006

**Mechanical Data**

- Case: DFN1006
- Molding compound: UL flammability classification rating 94V-0
- Terminals: solderable per MIL-STD-202, Method 208



**Schematic Diagram**

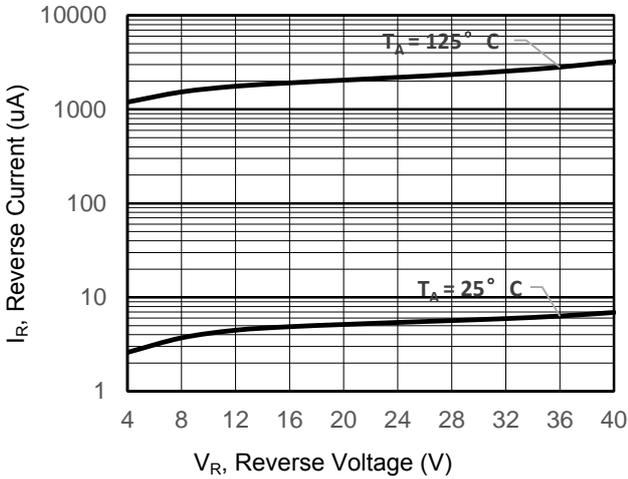
**Maximum Ratings** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| Parameter  | Symbol          | Value       | Unit               |
|--|-----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage                          | $V_{RRM}$       | 40          | V                  |
| RMS Reverse Voltage                                      | $V_{RMS}$       | 28          | V                  |
| Maximum Average Forward Output Current                   | $I_{F(AV)}$     | 0.5         | A                  |
| Peak Forward Surge Current (8.3ms single half sine-wave) | $I_{FSM}$       | 2.0         | A                  |
| Power Dissipation  | $P_d$           | 150         | mW                 |
| Thermal Resistance Junction to Air                       | $R_{\theta JA}$ | 667         | $^\circ\text{C/W}$ |
| Thermal Resistance Junction-to-Lead                      | $R_{\theta JL}$ | 337         | $^\circ\text{C/W}$ |
| Thermal Resistance Junction-to-Case                      | $R_{\theta JC}$ | 400         | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range                     | $T_J$           | 125         | $^\circ\text{C}$   |
| Storage Temperature Range                                | $T_{STG}$       | -55 to +150 | $^\circ\text{C}$   |

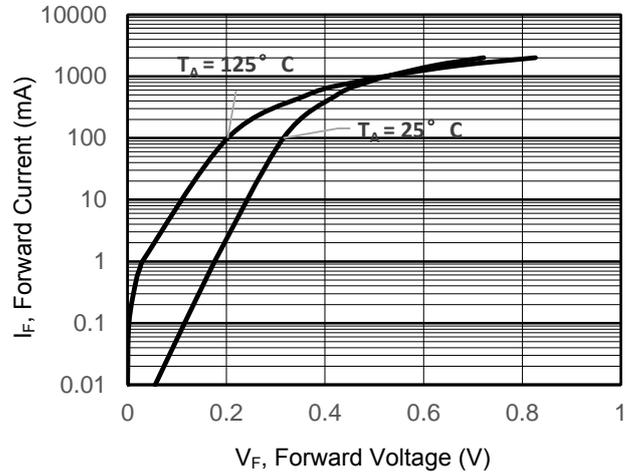
**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| Parameter                       | Symbol | Test Condition     | Typ  | MAX  | UNIT          |
|---------------------------------|--------|--------------------|------|------|---------------|
| Forward Voltage                 | $V_F$  | $I_F=0.01\text{A}$ | 0.25 | -    | V             |
|                                 |        | $I_F=0.1\text{A}$  | 0.35 | -    | V             |
|                                 |        | $I_F=0.5\text{A}$  | -    | 0.5  | V             |
| Reverse Voltage Leakage Current | $I_R$  | $V_R=40\text{V}$   | -    | 50.0 | $\mu\text{A}$ |

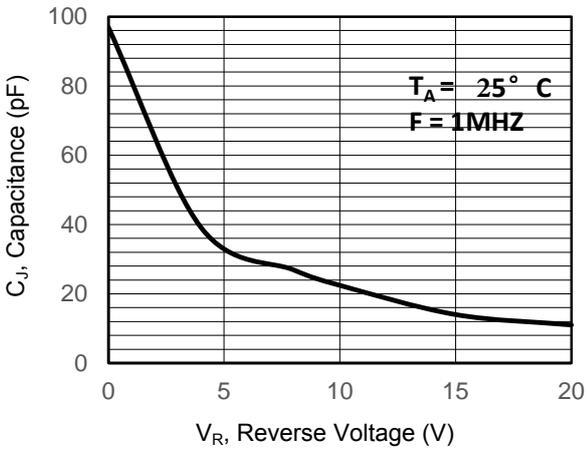
**Typical Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)



**Figure 1. Typical Reverse Characteristic**

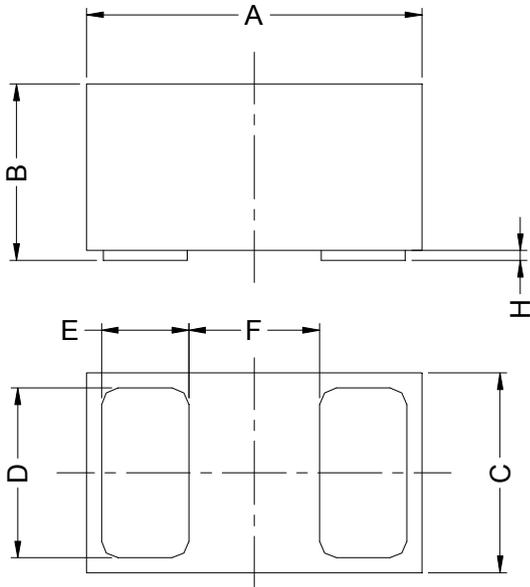


**Figure 2. Typical Forward Characteristic**



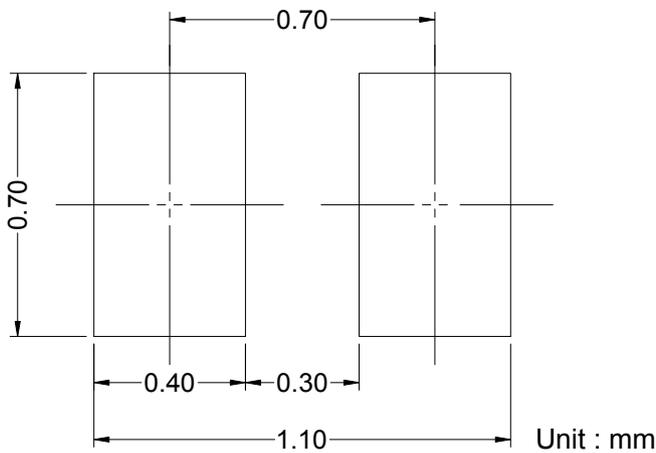
**Figure 3. Capacitance Characteristic**

**Package Outline Dimensions (DFN1006)**



| DFN1006-2 (unit:mm) |      |      |       |
|---------------------|------|------|-------|
| Dim                 | 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  |

**Recommended Pad Layout**



**Order Information**

| Device      | Package | Marking | Carrier     | Quantity  |
|-------------|---------|---------|-------------|-----------|
| GSBAT0540LP | DFN1006 | SF      | Tape & Reel | 10,000pcs |