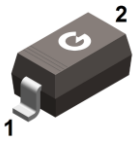
# Small Signal Schottky Barrier Diode

## 1N5711W 1N5711WS 1N5711L

## Features

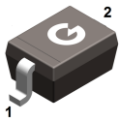
- Low forward voltage drop
- Fast switching speed
- Low capacitance
- Guard ring construction for transient protection

HF



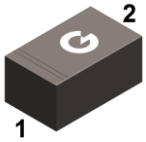

1N5711W

SOD-123



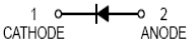

1N5711WS

SOD-323




1N5711L

DFN1006-2




## Typical Applications

- Surface mount fast switching schottky diode

## Mechanical Data

- Case: SOD-123, SOD-323, DFN1006-2
- Terminals: solderable per MIL-STD-202, Method 208

## Ordering Information

| Part Number | Package | Shipping | Marking Code |
|---|---|---|---|
| 1N5711W | SOD-123 | 3000 pcs / Tape & Reel | SA |
| 1N5711WS | SOD-323 | 3000 pcs / Tape & Reel | SA |
| 1N5711L | DFN1006-2 | 10000 pcs / Tape & Reel | SA |

## Maximum Ratings (@$T_A$=25℃ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Reverse Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 70 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 49 | V |
| Forward Continuous Current | $I_F$ | 15 | mA |

## Thermal Characteristics

| Parameter | Symbol | 1N5711W | 1N5711WS | 1N5711L | Unit |
|---|---|---|---|---|---|
| Power dissipation | $P_D$ | 400 | 200 | 100 | mW |
| Typical thermal resistance per leg | $R_{\Theta JA}$* | 250 | 500 | 1000 | °C /W |
| Operating junction temperature range | $T_J$ | -55 to +125 | | | °C |
| Storage temperature range | $T_{STG}$ | -55 to +150 | | | °C |
| * Part mounted on FR-4 board with recommended pad layout | | | | | |

## Electrical Characteristics (@$T_A$=25℃ unless otherwise specified)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R$=10μA | 70 | - | - | V |
| Forward Voltage | $V_F$ | $I_F$=1mA | - | - | 0.41 | V |
| | | $I_F$=15mA | - | - | 1 | V |
| Reverse Leakage Current | $I_R$ | $V_R$=50V | - | - | 200 | nA |
| Capacitance Between Terminals | $C_T$ | $V_R$=0V,f=1MHz | - | - | 2 | pF |
| Reverse Recovery Time | $t_{rr}$ | $I_F$=$I_R$=10mA,$I_{rr}$=0.1*$I_R$ $R_L$=100Ω | - | - | 1 | ns |

## Ratings and Characteristic Curves ($T_A$=25℃ unless otherwise noted)

FIG 1.TYPICAL REVERSE CHARACTERISTIC

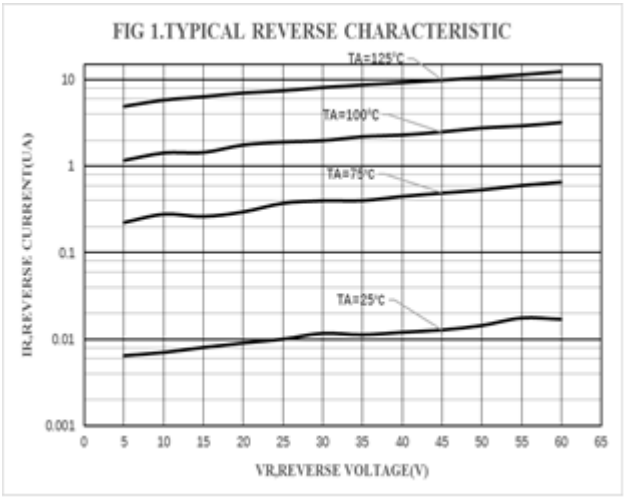



FIG 2.TYPICAL FORWARD CHARACTERISTIC

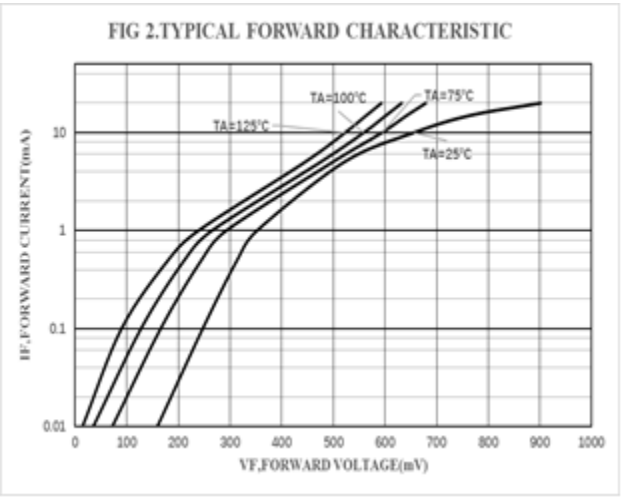



FIG 3.CAPACITANCE VS REVERSE VOLTAGE

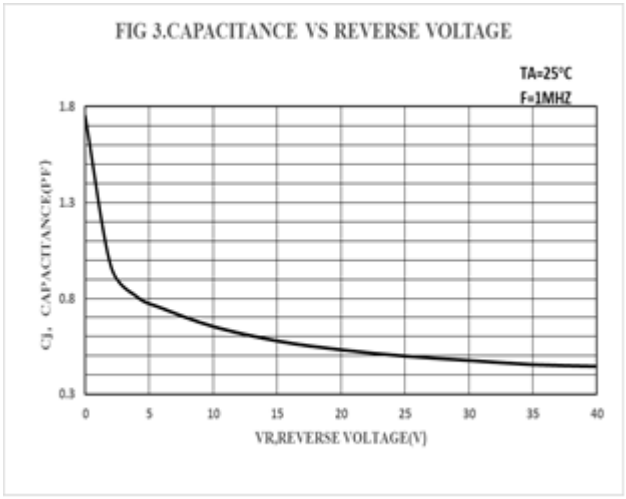
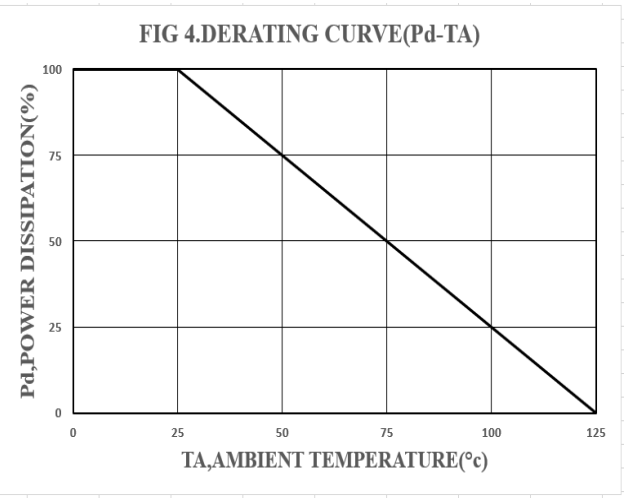
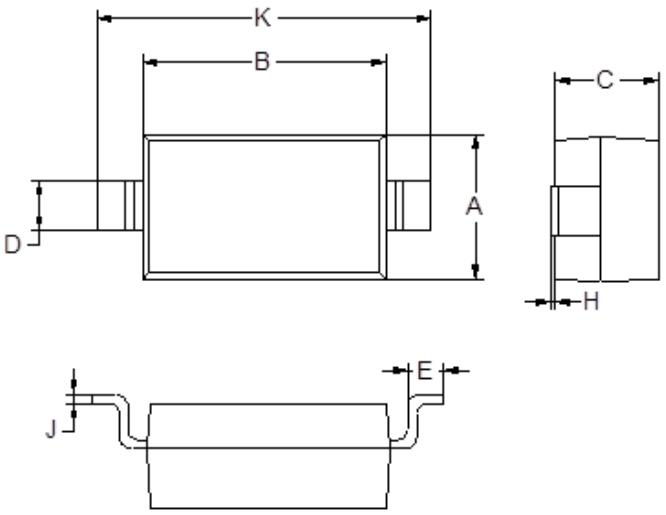



FIG 4.DERATING CURVE(Pd-TA)



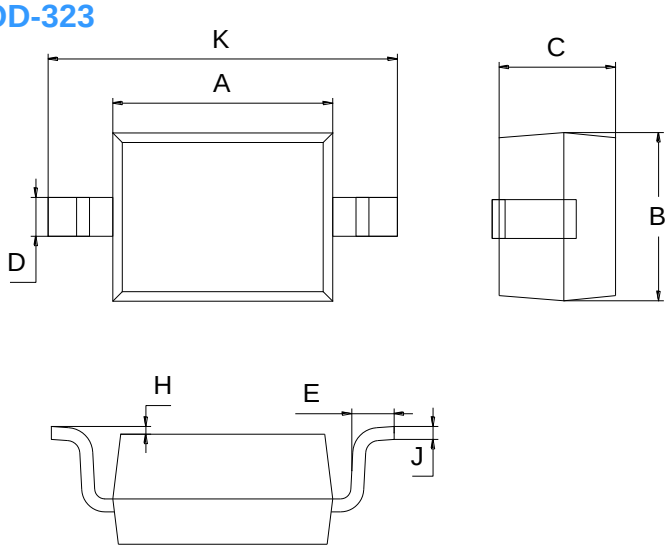
## Package Outline Dimensions (unit: mm)

### SOD-123



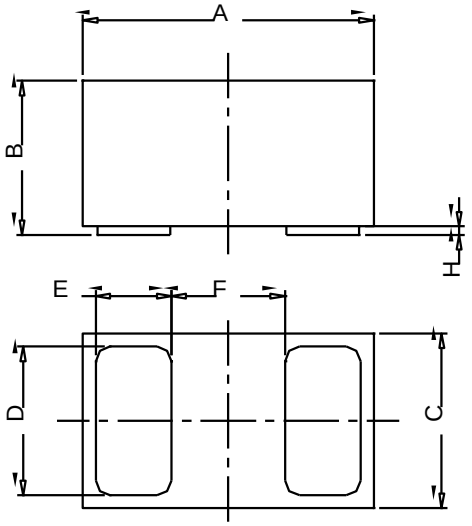

| SOD-123 | | |
|---|---|---|
| Dim | Min | Max |
| A | 1.45 | 1.75 |
| B | 2.55 | 2.85 |
| C | 1.00 | 1.30 |
| D | 0.50 | 0.60 |
| E | 0.25 | 0.45 |
| H | 0.02 | 0.10 |
| J | 0.05 | 0.15 |
| K | 3.55 | 3.85 |

### SOD-323




| SOD-323 | | |
|---|---|---|
| Dim | Min | Max |
| A | 1.60 | 1.80 |
| B | 1.20 | 1.40 |
| C | 0.80 | 0.90 |
| D | 0.25 | 0.35 |
| E | 0.22 | 0.42 |
| H | 0.02 | 0.10 |
| J | 0.05 | 0.15 |
| K | 2.55 | 2.75 |

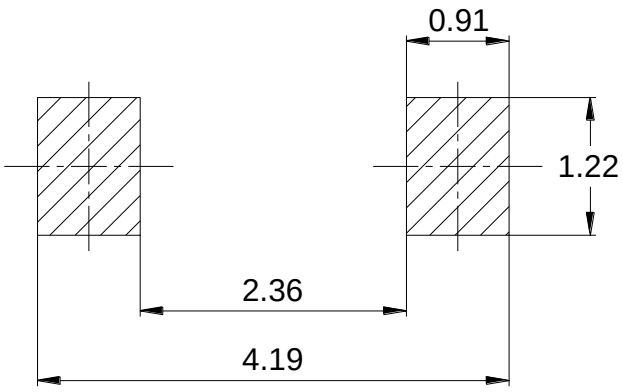
### DFN1006-2



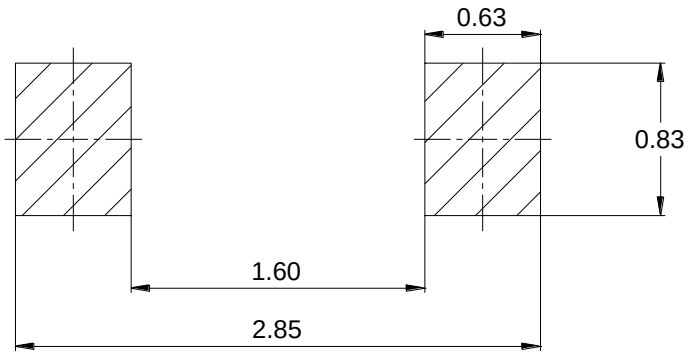

| DFN1006-2 | | | |
|---|---|---|---|
| Dim | Min | Typ | Max |
| A | 0.95 | 1.00 | 1.075 |
| B | 0.47 | 0.50 | 0.53 |
| C | 0.55 | 0.60 | 0.675 |
| D | 0.45 | 0.50 | 0.55 |
| E | 0.20 | 0.25 | 0.30 |
| F | - | 0.40 | - |
| H | 0 | 0.03 | 0.05 |

## Mounting Pad Layout (unit: mm)

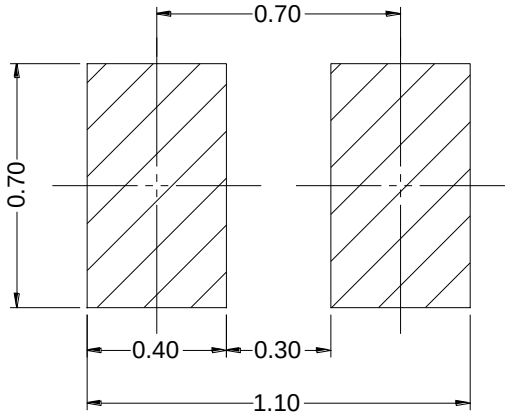
### SOD-123




### SOD-323




### DFN1006-2

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