



# SKV1220

## Features

- Excellent linearity
- Ultra small plastic SMD package
- C4: 6.6 pF; ratio: 4
- Low series resistance

## Applications

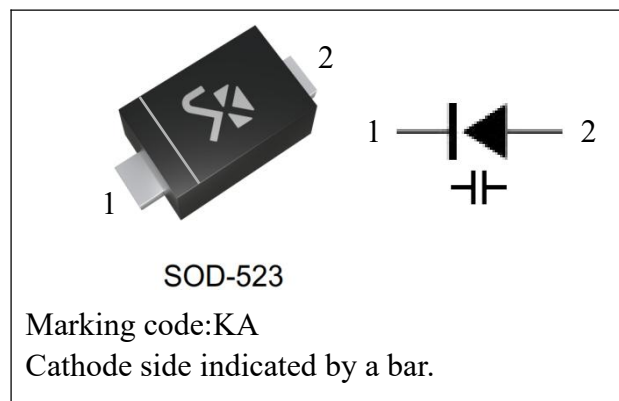
- Electronic tuning in UHF television tuners
- Voltage controlled oscillators(VCO)

## Description

The SKV1220 is a planar technology variable capacitance diode, in a SOD-523 package. The excellent matching performance is achieved by gliding matching and a direct matching assembly procedure.

## Pinning

| Pin | Description |
|-----|-------------|
| 1   | Cathode     |
| 2   | anode       |



## Maximum Ratings

| Parameter                           | Symbol    | Value    | Unit |
|-------------------------------------|-----------|----------|------|
| Continuous Reverse Voltage          | $V_R$     | 20       | V    |
| Peak Reverse Voltage <sup>(1)</sup> | $V_{RM}$  | 30       | V    |
| Continuous Forward Current          | $I_F$     | 20       | mA   |
| Storage Temperature Range           | $T_{STG}$ | -55~+150 | °C   |
| Operating Junction Temperature      | $T_J$     | -55~+125 | °C   |

Note:(1).The test needs to be done with a 10k $\Omega$  resistor in series

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

| Parameter         | Symbol                | Condition                                                     | Min  | Typ | Max   | Unit     |
|-------------------|-----------------------|---------------------------------------------------------------|------|-----|-------|----------|
| Reverse Current   | $I_R$                 | $V_R=16\text{V}$                                              | -    | -   | 10    | nA       |
|                   |                       | $V_R=16\text{V}, T_J=85^{\circ}\text{C}$                      | -    | -   | 200   | nA       |
| Series Resistance | $r_s$                 | $f=470\text{MHz}, V_R$ is the value at which $C_d=9\text{pF}$ | -    | 0.6 | 0.75  | $\Omega$ |
| Capacitance       | $C_{d(1V)}$           | $V_R=1\text{V}, f=1\text{MHz}$                                | 26   | -   | 28.25 | pF       |
|                   | $C_{d(4V)}$           | $V_R=4\text{V}, f=1\text{MHz}$                                | 5.55 | -   | 7.55  | pF       |
| Capacitance Ratio | $C_{d(1V)}/C_{d(4V)}$ | $f=1\text{MHz}$                                               | 3.0  | 4.0 | --    |          |



## Typical Characteristics

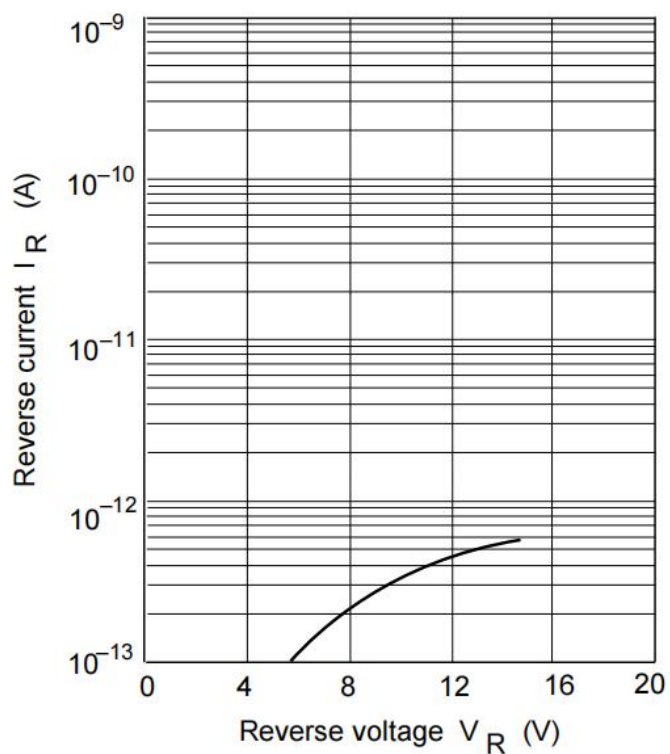


Fig.1 Reverse current Vs. Reverse voltage

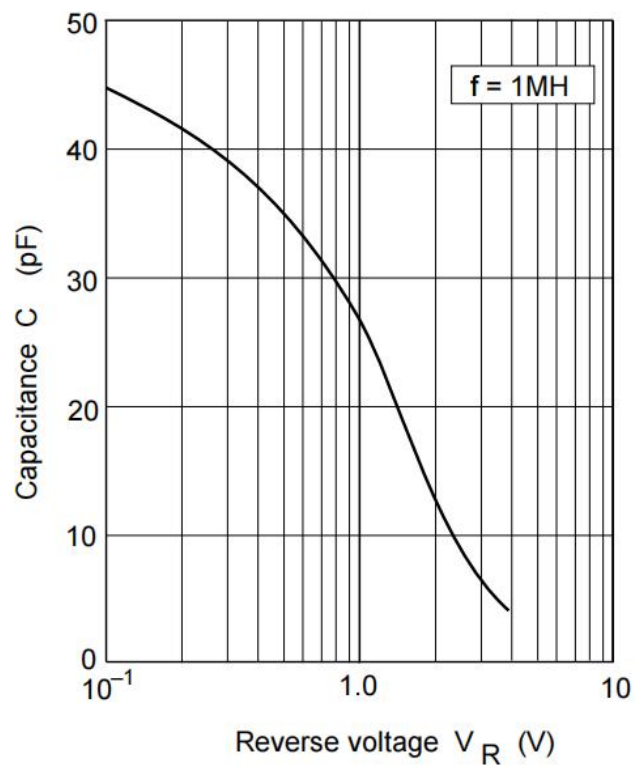


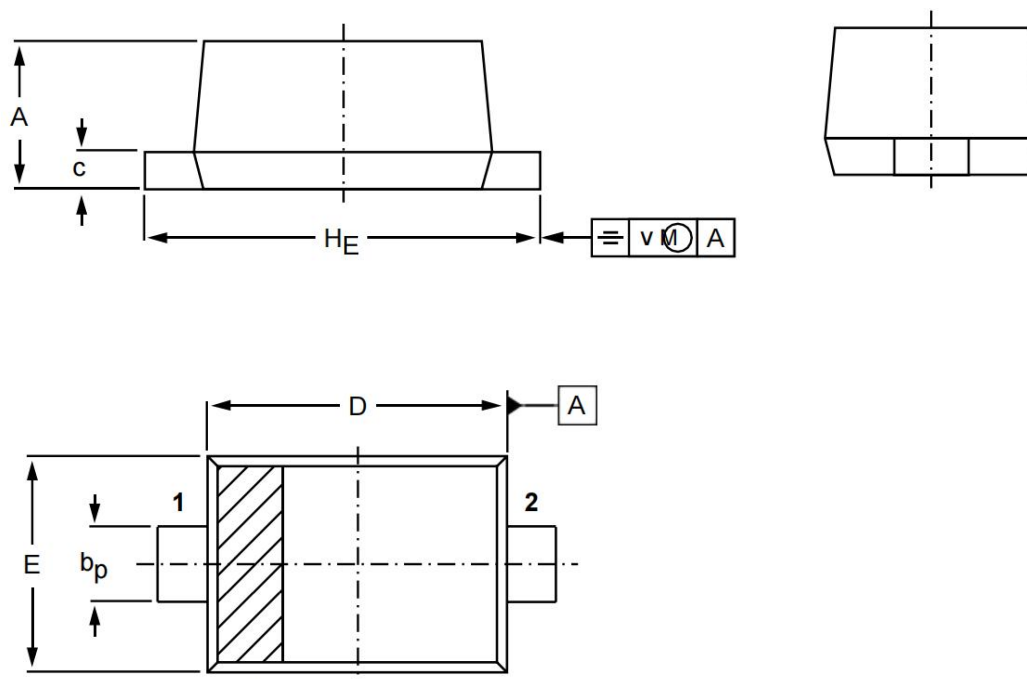
Fig.2 Capacitance Vs. Reverse voltage



## Package Information

### SOD-523

### Dimensions in mm



### Dimensions(mm are the original dimensions)

| UNIT | A          | b <sub>p</sub> | c          | D          | E          | H <sub>E</sub> | v    |
|------|------------|----------------|------------|------------|------------|----------------|------|
| mm   | 0.7<br>0.5 | 0.35<br>0.25   | 0.2<br>0.1 | 1.3<br>1.1 | 0.9<br>0.7 | 1.7<br>1.5     | 0.15 |



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