

# 广东协铨微电子科技有限公司

## Switching Diode 开关二极管

## XCD56

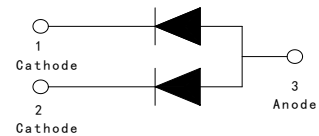
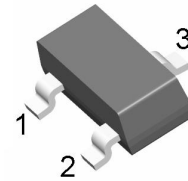
### DESCRIPTION & FEATURES 概述及特点

Low forward voltage 低正向压降

Fast reverse recovery time 快恢复时间

Ultra High Speed Switching Application 超高速开关应用

SOT-23



### PIN ASSIGNMENT 引脚说明

| PIN NAME<br>管脚符号 | PIN NUMBER 引脚序号 | FUNCTION<br>功能 |
|------------------|-----------------|----------------|
|                  | SOT-23          |                |
| C                | 1               | Cathode        |
| C                | 2               | Cathode        |
| A                | 3               | Anode          |

### MAXIMUM RATINGS(T<sub>a</sub>=25℃) 最大额定值

| CHARACTERISTIC 特性参数                 | Symbol 符号              | Rating 额定值 | Unit 单位 |
|-------------------------------------|------------------------|------------|---------|
| Continuous Reverse Voltage 连续反向电压   | V <sub>R</sub>         | 70         | Vdc     |
| Peak Forward Current 正向峰值电流         | I <sub>F</sub>         | 200        | mAdc    |
| Peak Forward Surge Current 正向最大浪涌电流 | I <sub>FM(surge)</sub> | 500        | mAdc    |

### THERMAL CHARACTERISTICS 热特性

| CHARACTERISTIC 特性参数                                                               | Symbol 符号                            | Max 最大值          | Unit 单位 |
|-----------------------------------------------------------------------------------|--------------------------------------|------------------|---------|
| Total Device Dissipation FR-5 Board(1) T <sub>A</sub> =25℃                        | PD                                   | 225              | mW      |
| Total Device Dissipation Alumina Substrate,(2) T <sub>A</sub> =25℃<br>总耗散功率 氧化铝衬底 | P <sub>D</sub>                       | 300              | mW      |
| Junction and Storage Temperature 结温和储存温度                                          | T <sub>J</sub> ,<br>T <sub>stg</sub> | 150,<br>-55 ~150 | ℃       |

1. FR-5=1.0×0.75×0.062in, printed-circuit board.

2. Alumina=0.4×0.3×0.024in, 99.5%alumina

### DEVICE MARKING 打标

XCD56=A1

### ELECTRICAL CHARACTERISTICS 电特性

(T<sub>A</sub>=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

| Characteristic 特性参数                      | Symbol 符号         | Test Condition 测试条件                                              | Min 最小值 | Type 典型值 | Max 最大值 | Unit 单位 |
|------------------------------------------|-------------------|------------------------------------------------------------------|---------|----------|---------|---------|
| Reverse Voltage Leakage Current<br>反向漏电流 | I <sub>R</sub>    | V <sub>R</sub> =70Vdc                                            | —       | —        | 2.5     | μA      |
|                                          |                   | V <sub>R</sub> =70Vdc, T <sub>j</sub> =150℃                      | —       | —        | 50      |         |
|                                          |                   | V <sub>R</sub> =25Vdc, T <sub>j</sub> =150℃                      | —       | —        | 30      |         |
| Reverse Breakdown Voltage<br>反向击穿电压      | V <sub>(BR)</sub> | I <sub>BR</sub> =100 μ Adc                                       | 70      | —        | —       | Vdc     |
| Forward Voltage 正向电压                     | V <sub>F</sub>    | I <sub>F</sub> =1mAdc                                            | —       | —        | 715     | mV      |
|                                          |                   | I <sub>F</sub> =10mAdc                                           | —       | —        | 855     |         |
|                                          |                   | I <sub>F</sub> =50mAdc                                           | —       | —        | 1000    |         |
|                                          |                   | I <sub>F</sub> =150mAdc                                          | —       | —        | 1250    |         |
| Diode Capacitance 电容                     | C <sub>D</sub>    | V <sub>R</sub> =0, f=1.0MHz                                      | —       | —        | 2.0     | pF      |
| Reverse Recovery Time<br>反向恢复时间          | t <sub>rr</sub>   | I <sub>F</sub> =I <sub>R</sub> =10mAdc,<br>R <sub>L</sub> =100 Ω | —       | —        | 6.0     | nS      |