

# 广东协铨微电子科技有限公司

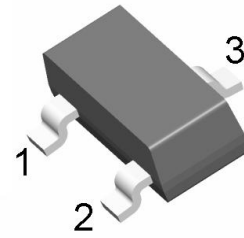
## RF Transistors 高频三极管

## XCT3356

### DESCRIPTION & FEATURES 概述及特点

High Frequency Low Noise Amplifier  
高频低噪声放大

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          |                |
| B                | 1               | BASE           |
| E                | 2               | EMITTER        |
| C                | 3               | COLLECTOR      |

### 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 |
|---------------------------------------|------------------|------------|---------|
| Collector-Emitter Voltage 集电极-发射极电压   | V <sub>CEO</sub> | 12         | Vdc     |
| Collector-Base Voltage 集电极-基极电压       | V <sub>CBO</sub> | 20         | Vdc     |
| Emitter-Base Voltage 发射极-基极电压         | V <sub>EBO</sub> | 3.0        | Vdc     |
| Collector Current—Continuous 集电极电流-连续 | I <sub>C</sub>   | 100        | mAdc    |

### THERMAL CHARACTERISTICS 热特性

| CHARACTERISTIC 特性参数                      | Symbol 符号                            | Max 最大值          | Unit 单位 |
|------------------------------------------|--------------------------------------|------------------|---------|
| Collector Power Dissipation 集电极耗散功率      | P <sub>c</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 | ℃       |

### DEVICE MARKING 打标

XCT3356R23=R23 (50~100)

XCT3356R24=R24 (80~160)

XCT3356R25=R25 (125~250)

### 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 |
|-------------------------------------------------|---------------------------------|---------------------------------------------------------|---------|----------|---------|---------|
| Collector Cutoff Current 集电极截止电流                | I <sub>CBO</sub>                | V <sub>CB</sub> =10V, I <sub>E</sub> =0                 | —       | —        | 1.0     | μA      |
| Emitter Cutoff Current 发射极截止电流                  | I <sub>EBO</sub>                | V <sub>EB</sub> =1V, I <sub>C</sub> =0                  | —       | —        | 1.0     | μA      |
| Collector-Emitter Breakdown Voltage 集电极-发射极击穿电压 | V <sub>(BR)CEO</sub>            | I <sub>C</sub> =1.0mA                                   | 12      | —        | —       | V       |
| Collector-Base Breakdown Voltage 集电极-基极击穿电压     | V <sub>(BR)CBO</sub>            | I <sub>C</sub> =10μA                                    | 20      | —        | —       | V       |
| Emitter-Base Breakdown Voltage 发射极-基极击穿电压       | V <sub>(BR)EBO</sub>            | I <sub>E</sub> =10μA                                    | 3.0     | —        | —       | V       |
| DC Current Gain 直流电流增益                          | h <sub>FE</sub>                 | V <sub>CE</sub> =10V, I <sub>C</sub> =20mA              | 50      | 120      | 250     | —       |
| Transition Frequency 特征频率                       | f <sub>T</sub>                  | V <sub>CE</sub> =10V, I <sub>C</sub> =20mA              | —       | 7        | —       | GHz     |
| Feed-Back Capacitance 反馈电容                      | C <sub>re</sub>                 | V <sub>CB</sub> =10V, I <sub>E</sub> =0,<br>f=1MHz      | —       | 0.55     | 1.0     | pF      |
| Insertion Power Gain 插入功率增益                     | S <sub>21e</sub>   <sup>2</sup> | V <sub>CE</sub> =10V, I <sub>C</sub> =20mA,<br>f=1.0GHz | —       | 11.5     | —       | dB      |
| Noise Factor 噪声系数                               | NF                              | V <sub>CE</sub> =10V, I <sub>C</sub> =7mA,<br>f=1.0GHz  | —       | 1.1      | 2.0     | dB      |