

Switching Diode 开关二极管

XCD4148

DESCRIPTION & FEATURES 概述及特点

Low forward voltage 低正向压降

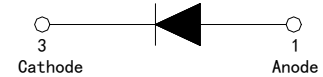
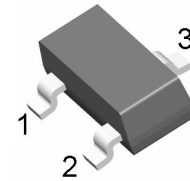
Fast reverse recovery time 快恢复时间

Ultra High Speed Switching Application 超高速开关应用

PIN ASSIGNMENT 引脚说明

PIN NAME 管脚符号	PIN NUMBER 引脚序号 SOT-23	FUNCTION 功能
A	1	Anode
NC	2	—
C	3	Cathode

SOT-23



MAXIMUM RATINGS(T_a=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 _R	75	Vdc
Peak Reverse Voltage 反向峰值电压	V _{RM}	100	Vdc
Peak Forward Current 正向峰值电流	I _F	200	mAdc
Peak Forward Surge Current 正向最大浪涌电流	I _{FM(surge)}	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 _A =25℃	P _D	225	mW
Total Device Dissipation Alumina Substrate,(2) T _A =25℃ 总耗散功率 氧化铝衬底	P _D	300	mW
Junction and Storage Temperature 结温和储存温度	T _J , T _{stg}	150, -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

XCD4148=KA2

ELECTRICAL CHARACTERISTICS 电特性

(T_A=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 反向漏电流	I _R	V _R =75Vdc	—	—	1.0	μA
		V _R =75Vdc, T _j =150℃	—	—	50	
		V _R =25Vdc, T _j =150℃	—	—	30	
Reverse Breakdown Voltage 反向击穿电压	V _(BR)	I _{BR} =100 μAdc	100	—	—	Vdc
Forward Voltage 正向电压	V _F	I _F =1mAdc	—	—	715	mV
		I _F =10mAdc	—	—	855	
		I _F =50mAdc	—	—	1000	
		I _F =150mAdc	—	—	1250	
Diode Capacitance 电容	C _D	V _R =0, f=1.0MHz	—	—	2.0	pF
Forward Recovery Voltage 正向恢复电压	V _{FR}	I _F =10mAdc, t _r =20ns	—	—	1.75	Vdc
Reverse Recovery Time 反向恢复时间	t _{rr}	V _R =6V, I _F =10mA, R _L =100 Ω, i _{rr} =0.1I _R	—	—	4.0	nS