

Resistive Transistors 帶阻三極管

NPN Silicon (FHRC241~FHRC246)

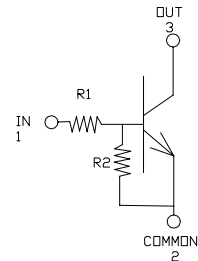
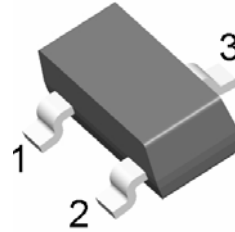
DESCRIPTION & FEATURES 概述及特點

With Built-in Bias Resistors 內部基極帶阻
 Simplify Circuit Design 簡單的回路設計
 Reduce a Quantity of Parts and Manufacturing Process
 簡化了外部元件及貼片過程

SOT-23

PIN ASSIGNMENT 引腳說明

PIN NAME 管腳符號	PIN NUMBER 引腳序號	FUNCTION 功能
	SOT-23	
IN	1	Input
COMMON	2	Common
OUT	3	Output

MAXIMUM RATINGS (T_a=25°C) 最大額定值

CHARACTERISTIC 特性參數		Symbol 符號	Rating 額定值	Unit 單位
Output Voltage 輸出電壓		V _O	50	V
Input Voltage 輸入電壓	FHRC241	V _I	10~-10	V
	FHRC242		12~-10	
	FHRC243		20~-10	
	FHRC244		30~-10	
	FHRC245		10~-5	
	FHRC246		12~-6	
Output Current 輸出電流		I _O	800	mA
Power Dissipation 耗散功率		P _D	200	mW
Junction Temperature 結溫		T _J	150	°C
Storage Temperature Range 儲存溫度		T _{STG}	-55~150	°C

DEVICE MARKING 打標

TYPE 型號	FHRC241	FHRC242	FHRC243	FHRC244	FHRC245	FHRC246
MARK 打標	NQ	NR	NS	NT	NU	NV

ELECTRICAL CHARACTERISTICS 電特性

(T_A=25°C unless otherwise noted 如無特殊說明，溫度為 25°C)

Characteristic 特性參數		Symbol 符號	Test Condition 測試條件	Min 最小值	Type 典型值	Max 最大值	Unit 單位
Output Cutoff Current 輸出截止電流		I _{O(OFF)}	V _O =30V, V _I =0	-	-	500	nA
Transition Frequency 特徵頻率		f _T	V _O =10V, I _O =5mA	-	200	-	MHz
Output Voltage 輸出電壓		V _{O(ON)}	I _O =50mA, I _I =2.5mA	-	-	-0.3	V
Input Voltage (OFF) 輸入電壓(OFF)	FHRC241	V _{I(OFF)}	V _O =5V, I _O =0.1mA	0.5	-	-	V
	FHRC242			0.5	-	-	
	FHRC243			0.5	-	-	
	FHRC244			0.5	-	-	
	FHRC245			0.3	-	-	
	FHRC246			0.3	-	-	
Input Voltage (ON) 輸入電壓(ON)	FHRC241	V _{I(ON)}	V _O =0.3V, I _O =20mA	-	-	3.0	V
	FHRC242			-	-	3.0	
	FHRC243			-	-	3.0	
	FHRC244			-	-	3.0	
	FHRC245			-	-	3.0	
	FHRC246			-	-	2.0	

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Input Current 輸入電流	FHRC241	I _i	V _i =5V	-	-	7.2	mA
	FHRC242			-	-	3.8	
	FHRC243			-	-	1.8	
	FHRC244			-	-	0.88	
	FHRC245			-	-	7.2	
	FHRC246			-	-	3.6	
DC Current Gain 直流電流增益	FHRC241	G _i	V _o =5V, I _o =50mA	33	-	-	-
	FHRC242			39	-	-	
	FHRC243			47	-	-	
	FHRC244			56	-	-	
	FHRC245			56	-	-	
	FHRC246			56	-	-	
Input Resistance 輸入電阻	FHRC241	R ₁		0.7	1	1.3	kΩ
	FHRC242			1.54	2.2	2.86	
	FHRC243			3.29	4.7	6.11	
	FHRC244			7	10	13	
	FHRC245			0.7	1	1.3	
	FHRC246			1.54	2.2	2.86	
Resistance Ratio 電阻比	FHRC241	R ₂ /R ₁		0.8	1	1.2	-
	FHRC242			0.8	1	1.2	
	FHRC243			0.8	1	1.2	
	FHRC244			0.8	1	1.2	
	FHRC245			8	10	12	
	FHRC246			3.6	4.5	5.5	