

Amplifier Transistors NPN Silicon

Descriptions:

Silicon NPN transistor in a TO-92 Plastic Package.

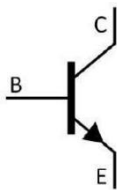
Features:

Low Leakage current, Low collector saturation voltage enabling low voltage operation.

Applications:

General purpose amplifier.

Equivalent Circuit:



TO-92

1 2 3

PIN 1 : Collector PIN 2 : Base PIN 3 : Emitter

hFE Classifications & Marking

*HFE(1)分档及打印

分档	1					印记见下 具体内容以打印为 准
HFE(1)	100~300					
打印(简例)						
其它说明	封装外形: TO-92 管脚排列: E、B、C					2N 2222A H 331

Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	VCBO	75	V
Collector to Emitter Voltage	VCEO	40	V
Emitter to Base Voltage	VEBO	6.0	V
Collector Current - Continuous	IC	600	mA
Collector Power Dissipation	PC	625	mW
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~150	°C

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	VCBO	IC=10μA IE=0	75			V
Collector to Emitter Breakdown Voltage	VCEO	IC=10mA IB=0	40			V
Emitter to Base Breakdown Voltage	VEBO	IE=10μA IC=0	6.0			V
Collector Cut-Off Current	ICBO	VCB=60V IE=0			0.01	μA
Emitter Cut-Off Current	IEBO(1)	VEB=3.0V IC=0			0.01	μA
	IEBO(2)	VEB=5.0V IC=0			0.1	μA
DC Current Gain	hFE(1)	VCE=10V IC=150mA	100		300	
	hFE(2)	VCE=10V IC=0.1mA	40			
	hFE(3)	VCE=10V IC=500mA	42			
Collector-Emitter Saturation Voltage	VCE(sat) (1)	IC=150mA IB=15mA			0.3	V
	VCE(sat) (2)	IC=500mA IB=50mA			0.6	V
Base-Emitter Saturation Voltage	VBE(sat) (1)	IC=150mA IB=15mA		0.6	1.2	V
	VBE(sat) (2)	IC=500mA IB=50mA			1.2	V
Transition Frequency	fT	VCE=20V IC=20mA f=100MHz	300			MHz
Collector Output Capacitance	Cob	VCB=10V IE=0 f=1.0MHz			8.0	pF
Turn-On Time	Ton	VCC=30V VBE(OFF)=0.5V IC=150mA IB1=15mA			35	ns
Turn-Off Time	Toff	VCC=30V IC=150mA IB1=IB2=15mA			285	ns
Noise Figure	NF	IC=100μA VCE=10V RS=1.0KΩ f=1.0KHz			4.0	dB

Electrical Characteristic Curve

