



SRC1211U

NPN Silicon Transistor

Descriptions

- Switching application
- Interface circuit and driver circuit application

Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

Ordering Information

Type NO.	Marking	Package Code
SRC1211U	RD	SOT-323

Outline Dimensions

unit : mm

• Equivalent Circuit

The equivalent circuit diagram shows an NPN transistor with a base resistor R_1 connected to the base terminal (B(IN)). The emitter terminal is connected to the common ground (E(COMMON)), and the collector terminal is the output (C(OUT)). A box indicates $R_1 = 10K\Omega$.

PIN Connections

1. Base
2. Emitter
3. Collector

Dimensions:

- Overall width: 2.1 ± 0.1
- Base terminal width: 1.25 ± 0.05
- Emitter terminal width: 0.30 ± 0.1
- Collector terminal width: 0.15 ± 0.05
- Emitter terminal height: 0.30 ± 0.1
- Collector terminal height: 0.15 ± 0.05
- Base terminal height: 0.90 ± 0.1
- Emitter terminal thickness: $0 \sim 0.1$
- Collector terminal thickness: 0.1 Min.



Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	500	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	500	nA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	120	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10mA, I_B=0.5mA$	-	0.1	0.3	V
Transition Frequency	f_T^*	$V_{CE}=10V, I_C=5mA$	-	250	-	MHz
Input Resistance	R_1	-	-	10	-	KΩ

* : Characteristic of Transistor Only

Electrical Characteristic Curves

Fig. 1 $h_{FE} - I_C$

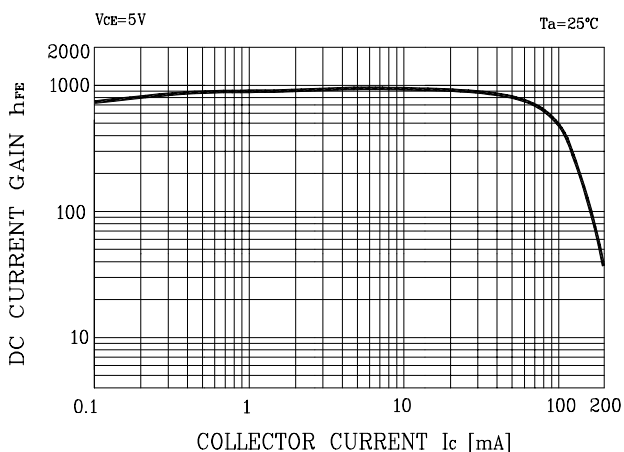


Fig. 2 $V_{CE(SAT)} - I_C$

