

**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
SRA2212E	BR	SOT-523

**Outline Dimensions**

unit : mm

The technical drawing includes a top view and a side view of the SOT-523 package. The top view shows a rectangular package with three pins labeled 1, 2, and 3. Dimensions are provided: total width is 1.60±0.1 mm, distance from pin 1 to pin 2 is 0.80±0.1 mm, and distance from pin 2 to pin 3 is 0.2~0.3 mm. The side view shows a height of 0~0.1 mm, a base width of 0.70±0.1 mm, and a base thickness of 0.15 Min. and 0.1 Min. at the edges.

**• Equivalent Circuit**

The equivalent circuit shows a PNP transistor with a base terminal B(IN) connected to a resistor R<sub>1</sub>. The collector terminal is C(OUT) and the emitter terminal is E(COMMON). A box indicates R<sub>1</sub> = 100KΩ.

**PIN Connections**

1. Base
2. Emitter
3. Collector



## 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	$P_D$	150	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	$R_1$	-	-	100	-	KΩ

\* : Characteristic of Transistor Only

## Electrical Characteristic Curves

Fig. 1  $h_{FE} - I_C$

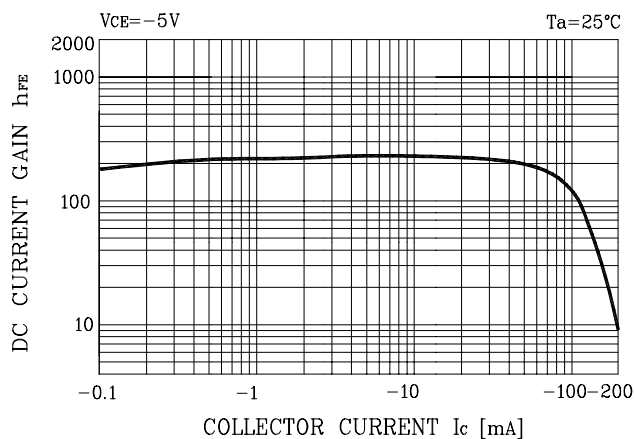


Fig. 2  $V_{CE(SAT)} - I_C$

