

# 2SA2110

## Silicon PNP epitaxial planar type

For low frequency power amplification

Complementary to 2SC2590

### ■ Features

- Extremely satisfactory linearity of the forward current transfer ratio  $h_{FE}$
- High transfer ratio  $f_T$
- Makes up a complementary pair with 2SC2590, which is optimum for the pre-driver stage of a 40 W to 60 W output amplifier.

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-120	V
Collector-emitter voltage (Base open)	$V_{CEO}$	-120	V
Emitter-base voltage (Collector open)	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.5	A
Peak collector current	$I_{CP}$	-1	A
Collector power dissipation	$P_C$	1.2	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

### ■ Package

- Code  
TO-126B-A1
- Pin Name
  1. Emitter
  2. Collector
  3. Base

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -100 \mu\text{A}, I_B = 0$	-120			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio *1	$h_{FE1}$ *2	$V_{CE} = -10 \text{ V}, I_C = -150 \text{ mA}$	90		220	—
	$h_{FE2}$	$V_{CE} = -5 \text{ V}, I_C = -500 \text{ mA}$	50	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$			-1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CB} = -10 \text{ V}, I_E = 50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		20	30	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

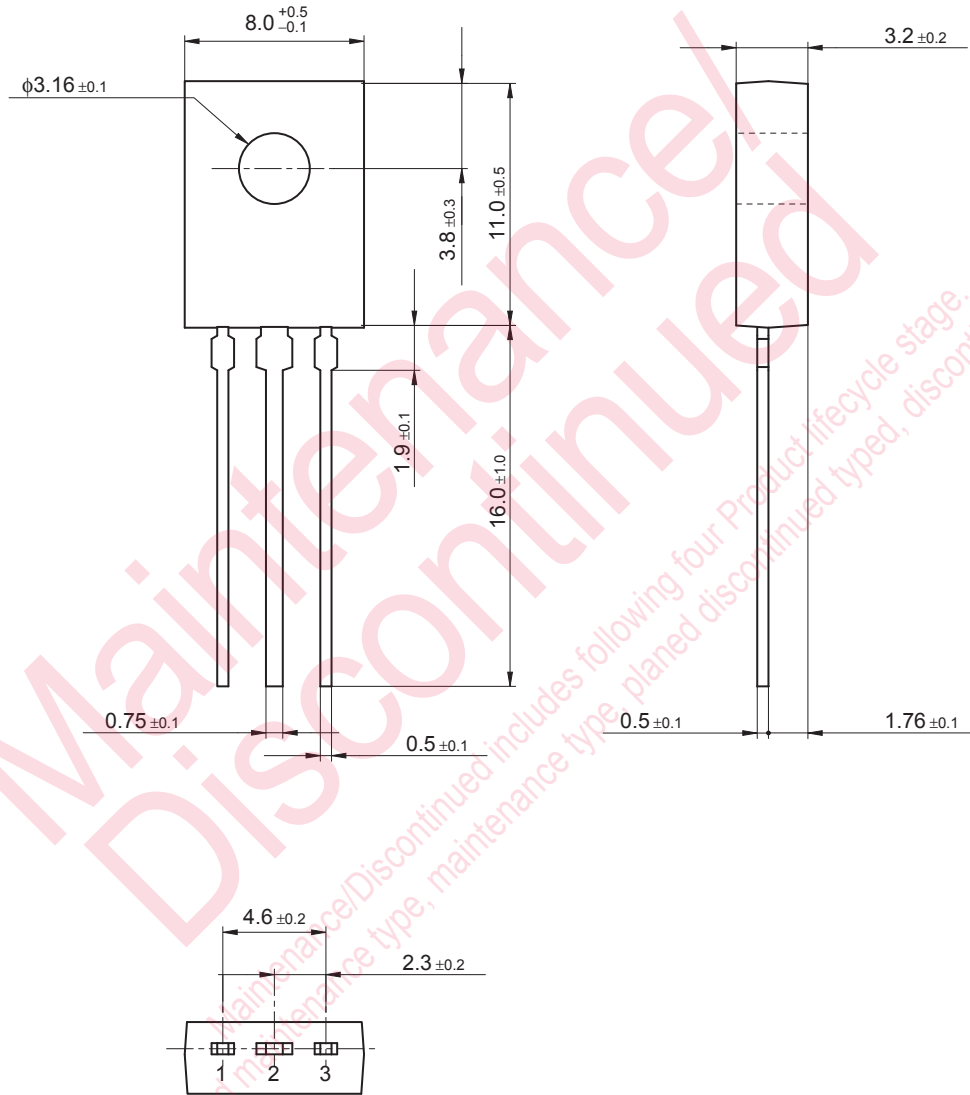
2. \*1: Pulse measurement

\*2: Rank classification

Rank	Q	R
$h_{FE1}$	90 to 160	120 to 220

TO-126B-A1

Unit: mm



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