〈Transistor〉

# 2SA1530A

For Low Frequency Amplify Application
Silicon PNP Epitaxial Type (Mini type)

## DESCURIPTION

2SA1530A is a super mini packege resin sealed silicon PNP epitaxial type transistor. It is designed for low frequency voltage amplify application.

## FEATURE

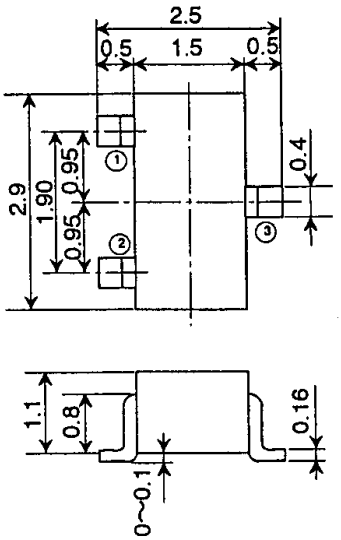
- Small collector to emitter saturation voltage
  $V_{CE(sat)}$=-0.3V max
- Excellent lineality of DC forward current gain
- Supper mini package for easy mounting

## APPLICATION

For hybrid IC,small type machine low frequency voltage amplify application.

OUTLINE DRAWING

Unit:mm




TERMINAL CONNECTOR

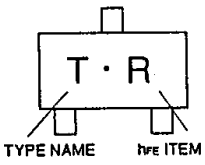
① : BASE
② : EMITTER
③ : COLLECTOR

EIAJ : SC-59
JEDEC : TO-236 resemblance

MAXIMUM RATINGS (Ta=25°C)

| Symbol | Parameter | Ratings | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector to Base voltage | -60 | V |
| $V_{EBO}$ | Emitter to Base voltage | -6 | V |
| $V_{CEO}$ | Collector to Emitter voltage | -50 | V |
| $I_C$ | Collector current | -150 | mA |
| $P_C$ | Collector dissipation(Ta=25°C) | 200 | mW |
| Tj | Junction temperature | +125 | °C |
| Tstg | Storage temprature | -55to+125 | °C |

MARKING




ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Symbol | Parameter | Test conditions | Limits | | | Unit |
|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | |
| $V_{(BR)CEO}$ | C to E break down voltage | $I_C$=-100μA, $R_{BE}$=∞ | -50 | | | V |
| $I_{CBO}$ | Collector cut off current | $V_{CB}$= -60V, $I_E$=0 | | | -0.1 | μA |
| $I_{EBO}$ | Emitter cut off current | $V_{EB}$=-4V, $I_C$=0 | | | -0.1 | μA |
| $h_{FE}$ * | DC forward current gain | $V_{CE}$=-6V, $I_C$=-1mA | 120 | | 560 | — |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=-6V, $I_C$=-0.1mA | 70 | | | — |
| $V_{CE(sat)}$ | C to E Saturation voltage | $I_C$=-100mA, $I_B$=-10mA | | | -0.3 | V |
| $f_T$ | Gain band width product | $V_{CE}$=-6V, $I_E$=10mA | | 200 | | MHz |
| Cob | Collector output capacitance | $V_{CB}$=-6V, $I_E$=0, f=1MHz | | 4 | | pF |
| NF | Noise figure | $V_{CE}$=-6V, $I_E$=0.3mA, f=100Hz,RG=10kΩ | | | 20 | dB |

*:It shows $h_{FE}$ claccification in right table.

| ITEM | Q | R | S |
|---|---|---|---|
| $h_{FE}$ | 120～270 | 180～390 | 270～560 |

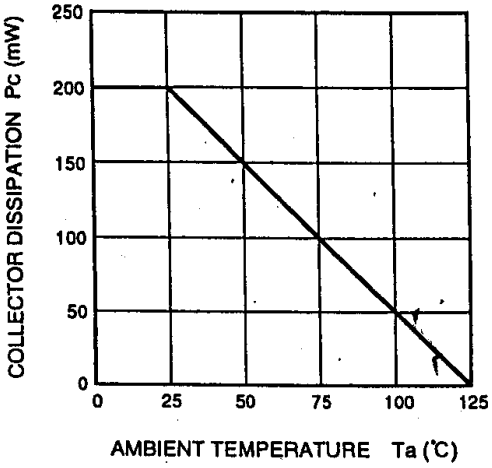
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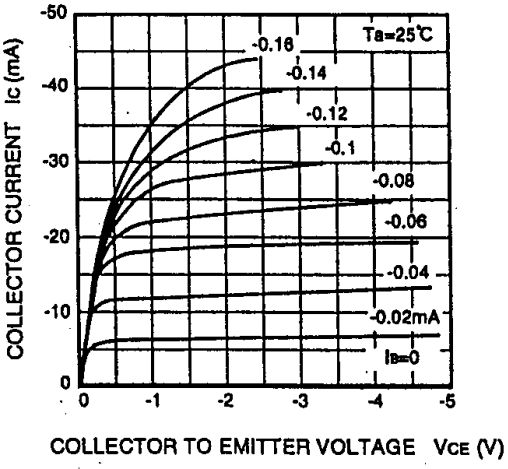
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## TYPICAL CHARACTERISTICS

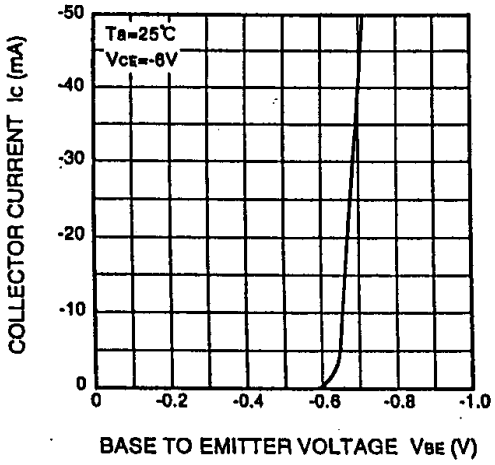
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



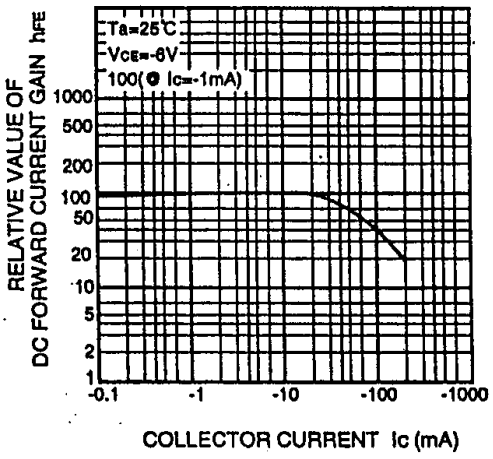

COMMON EMITTER OUTPUT



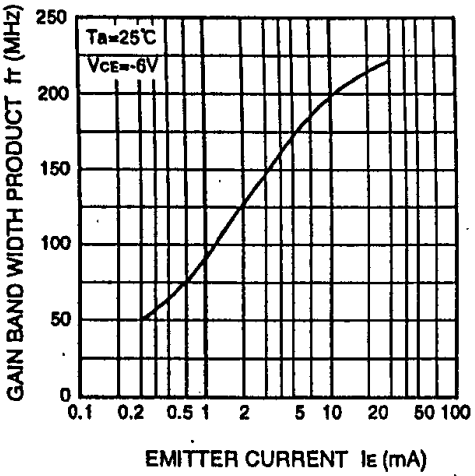

COMMON EMITTER TRANSFER



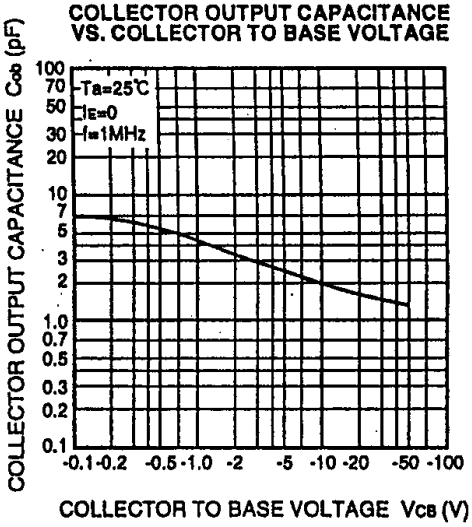

DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT




GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT




COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



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