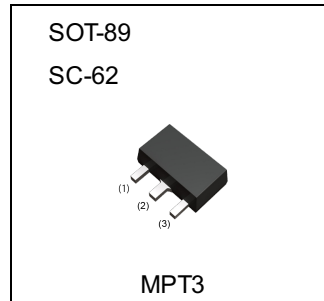


| Parameter | Value |
|-----------|-------|
| V_{CEO} | 400V |
| I_C | 100mA |

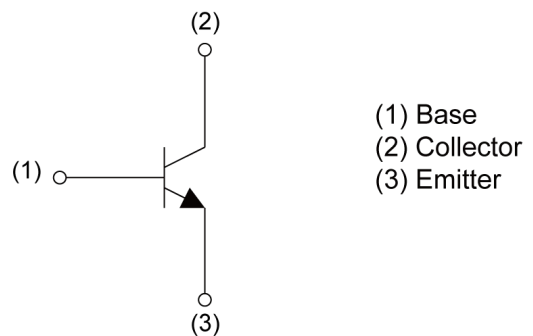
●Outline



●Features

- 1) Complementary PNP Types: 2SAR340P
- 2) Low $V_{CE(sat)}$
 $V_{CE(sat)} = 300\text{mV (Max)}$
 $(I_C/I_B = 20\text{mA}/2\text{mA})$

●Inner circuit



●Application

LOW FREQUENCY AMPLIFIER

●Packaging specifications

| Part No. | Package | Package size | Taping code | Reel size (mm) | Tape width (mm) | Basic ordering unit.(pcs) | Marking |
|----------|---------------|--------------|-------------|----------------|-----------------|---------------------------|---------|
| 2SCR346P | SOT-89 (MPT3) | 4540 | T100 | 180 | 12 | 1000 | HK |

● **Absolute maximum ratings** ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Values | Unit |
|------------------------------|---------------|-------------|------------------|
| Collector-base voltage | V_{CBO} | 400 | V |
| Collector-emitter voltage | V_{CEO} | 400 | V |
| Emitter-base voltage | V_{EBO} | 7 | V |
| Collector current | I_C | 100 | mA |
| | I_{CP}^{*1} | 200 | mA |
| Base current | I_B | 30 | mA |
| Power dissipation | P_D^{*2} | 0.5 | W |
| | P_D^{*3} | 2.0 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Range of storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

● **Electrical characteristics** ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Values | | | Unit |
|--------------------------------------|---------------|---|--------|------|------|---------------|
| | | | Min. | Typ. | Max. | |
| Collector-base breakdown voltage | BV_{CBO} | $I_C = 100\mu\text{A}$ | 400 | - | - | V |
| Collector-emitter breakdown voltage | BV_{CEO} | $I_C = 1\text{mA}$ | 400 | - | - | V |
| Emitter-base breakdown voltage | BV_{EBO} | $I_E = 100\mu\text{A}$ | 7 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 400\text{V}$ | - | - | 10 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 6\text{V}$ | - | - | 10 | μA |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 20\text{mA}, I_B = 2\text{mA}$ | - | 100 | 300 | mV |
| DC current gain | h_{FE} | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$ | 82 | - | 270 | - |
| Output capacitance | C_{ob} | $V_{CB} = 10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$ | - | 6 | - | pF |

h_{FE} values are classified as follows :

| rank | P | Q | - | - | - |
|----------|--------|---------|---|---|---|
| h_{FE} | 82-180 | 120-270 | - | - | - |

*1 $P_w=10\text{ms}$ Single Pulse

*2 Each terminal mounted on a reference land.

*3 Mounted on a $40 \times 40 \times 0.7\text{mm}$ ceramic board.

● Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig.1 Grounded Emitter Propagation Characteristics

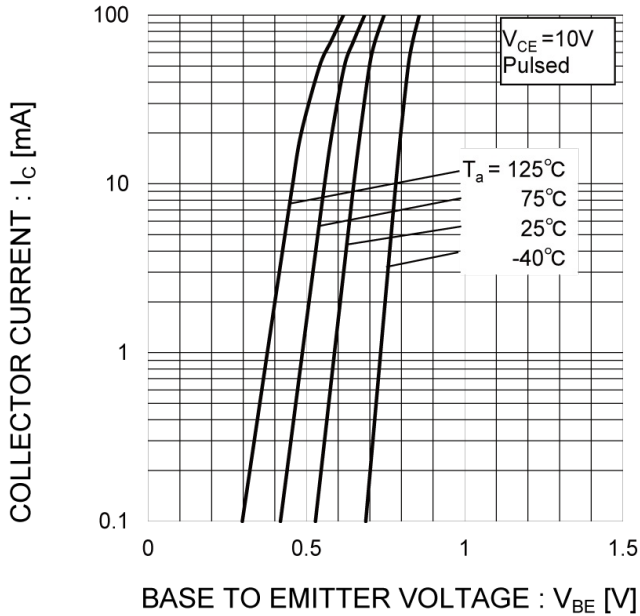


Fig.2 Typical Output Characteristics

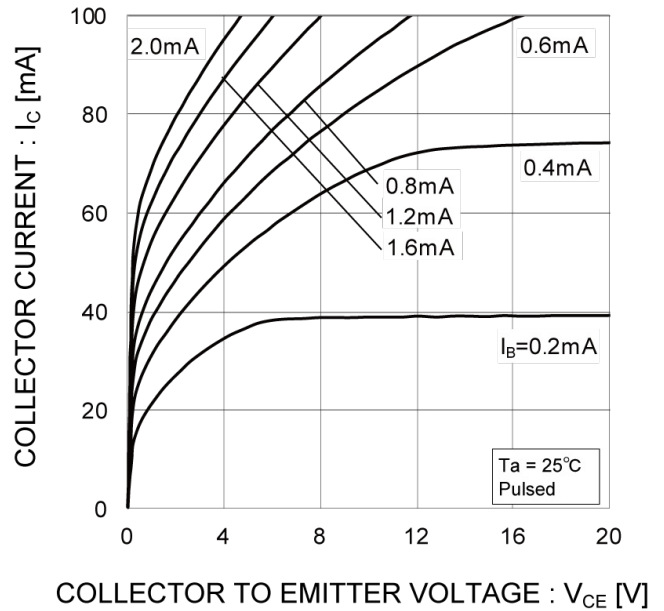


Fig.3 DC Current Gain vs Collector Current(I)

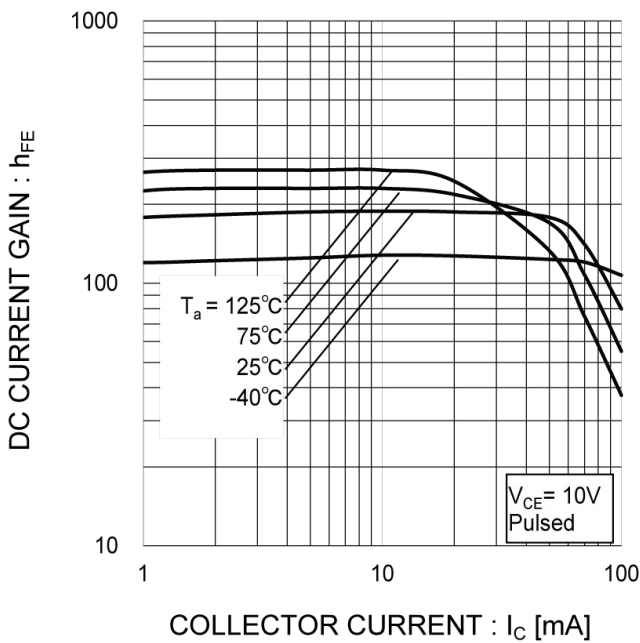
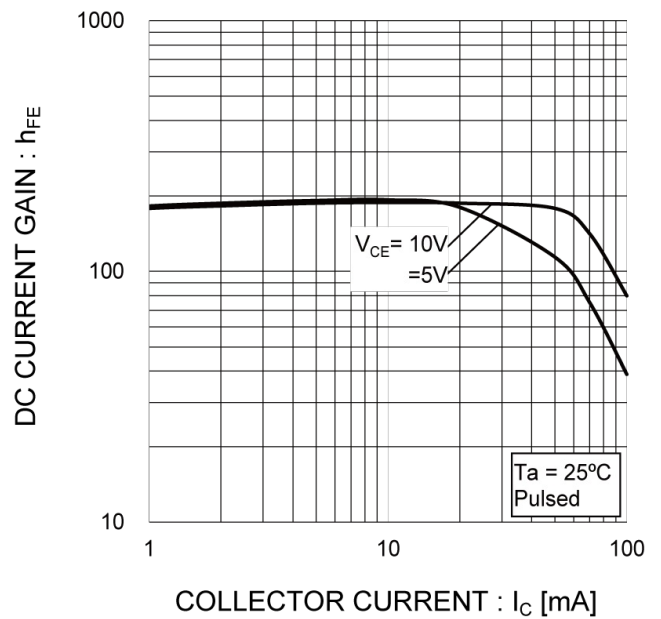


Fig.4 DC Current Gain vs Collector Current(II)



●Electrical characteristic curves($T_a = 25^\circ\text{C}$)

Fig.5 Collector-Emitter Saturation Voltage vs. Collector-Emitter Saturation Voltage vs. Collector Current(I)

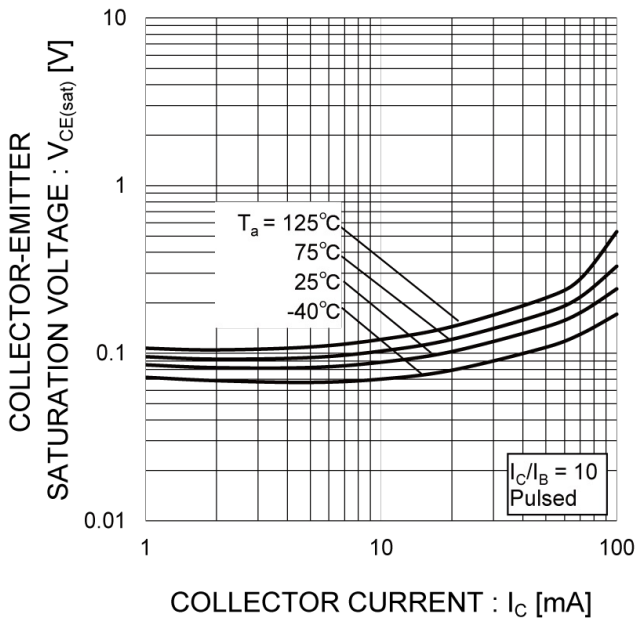


Fig.6 Collector-Emitter Saturation Voltage vs. Collector-Emitter Saturation Voltage vs. Collector Current(II)

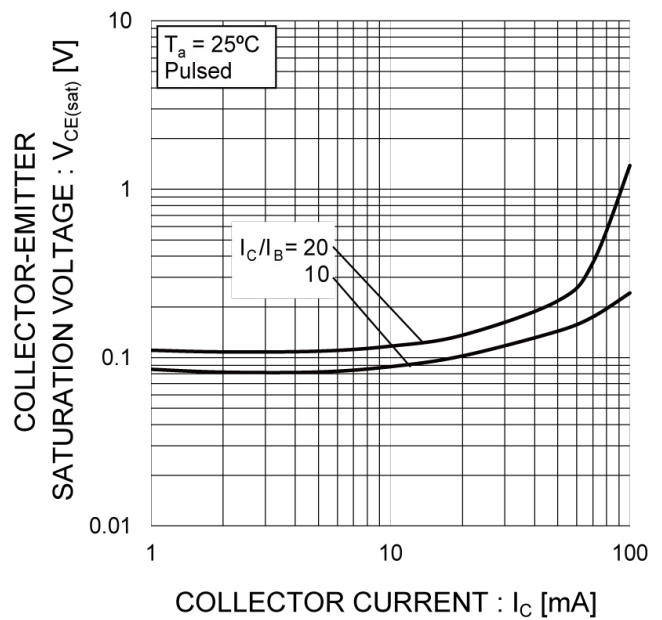


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

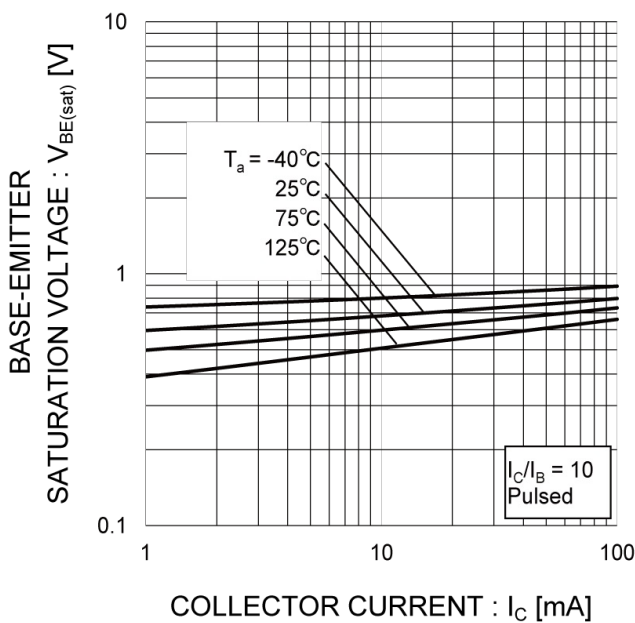
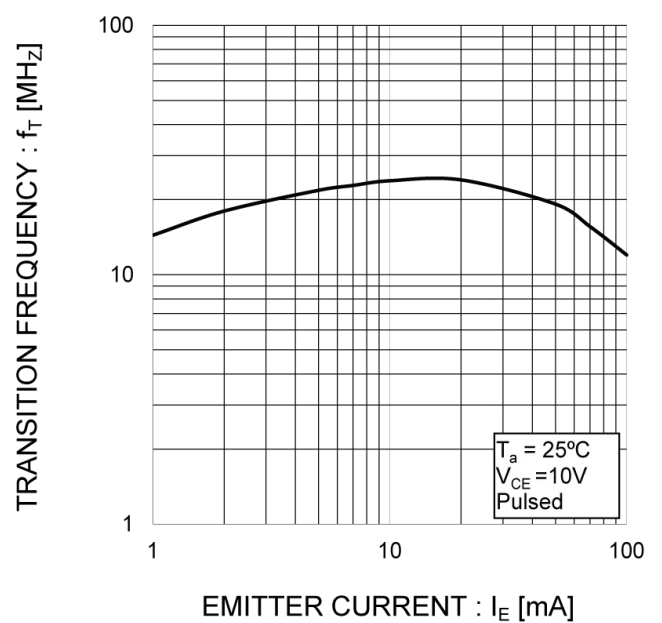


Fig.8 Gain Bandwidth Product vs. Emitter Current



● Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig.9 Emitter input capacitance vs. Emitter-Base Voltage
Collector output capacitance vs. Collector-Base Voltage

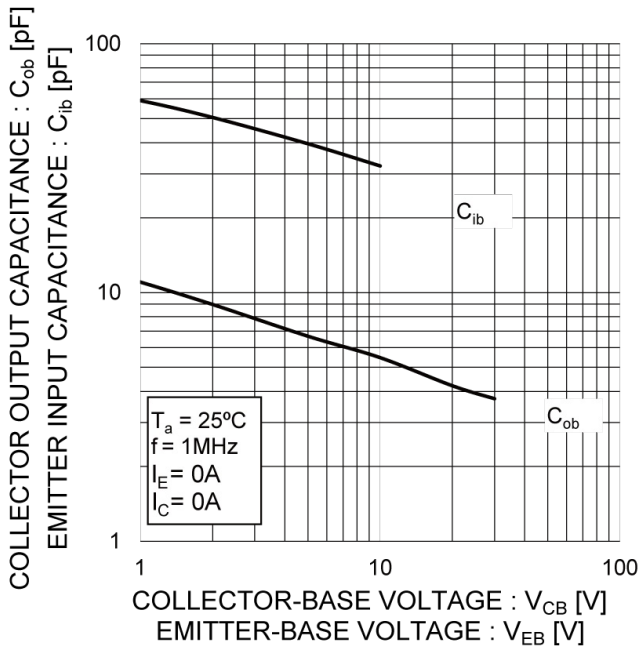
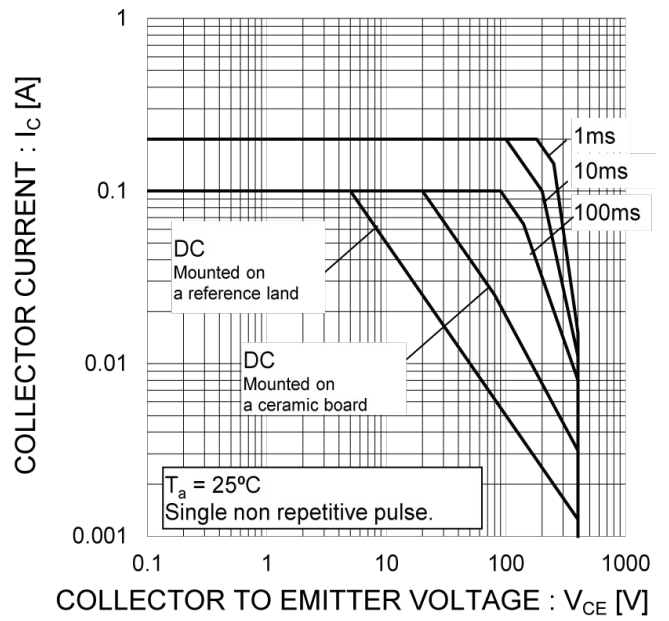
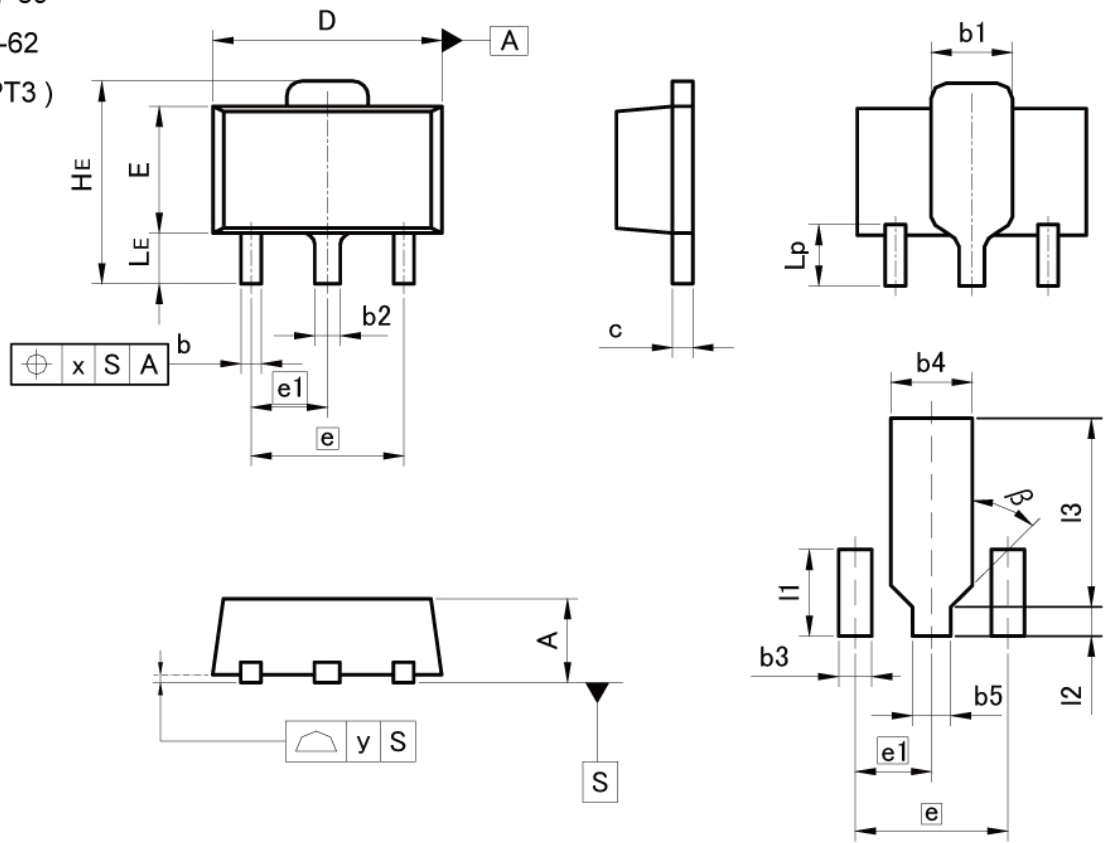


Fig.10 Safe Operating Area



●Dimensions

SOT-89
SC-62
(MPT3)



Pattern of terminal position areas
[Not a pattern of soldering pads]

| DIM | MILIMETERS | | INCHES | |
|-----|------------|------|--------|-------|
| | MIN | MAX | MIN | MAX |
| A | 1.40 | 1.50 | 0.055 | 0.059 |
| b | 0.30 | 0.50 | 0.012 | 0.020 |
| b1 | 1.50 | 1.70 | 0.059 | 0.067 |
| b2 | 0.40 | 0.60 | 0.016 | 0.024 |
| c | 0.35 | 0.50 | 0.014 | 0.020 |
| D | 4.40 | 4.70 | 0.173 | 0.185 |
| E | 2.40 | 2.70 | 0.094 | 0.106 |
| e | 3.00 | | 0.118 | |
| e1 | 1.50 | | 0.059 | |
| HE | 3.70 | 4.30 | 0.146 | 0.169 |
| LE | 0.80 | 1.20 | 0.031 | 0.047 |
| Lp | 1.01 | 1.41 | 0.040 | 0.056 |
| x | - | 0.15 | - | 0.006 |
| y | - | 0.10 | - | 0.004 |
| b3 | - | 0.65 | - | 0.026 |
| b4 | - | 1.70 | - | 0.067 |
| b5 | - | 0.75 | - | 0.030 |
| l1 | - | 1.71 | - | 0.067 |
| l2 | - | 0.58 | - | 0.023 |
| l3 | - | 3.72 | - | 0.146 |
| β | 45° | | 45° | |

Dimension in mm/inches

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2SCR346P - Web Page

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| | |
|-----------------------------|----------|
| Part Number | 2SCR346P |
| Package | MPT3 |
| Unit Quantity | 1000 |
| Minimum Package Quantity | 1000 |
| Packing Type | Taping |
| Constitution Materials List | inquiry |
| RoHS | Yes |

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