

INA5001AP1

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON PNP EPITAXIAL TYPE

DESCRIPTION

INA5001AP1 is a super mini package resin sealed silicon PNP epitaxial transistor, It is designed for relay drive or Power supply application.

FEATURE

- Super mini package for easy mounting
- Low $V_{CE(sat)}$ $V_{CE(sat)} = -0.5 \text{ V max} (@I_C = -500\text{mA}/I_B = -50\text{mA})$
- High collector current $I_C = -1\text{A}$
- High voltage $V_{CE0} = -50\text{V}$

APPLICATION

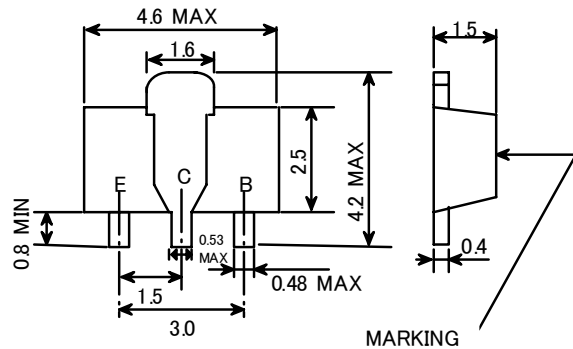
Relay drive, Power supply for audio equipment, VTR, etc

MAXIMUM RATINGS (Ta=25°C)

| Symbol | Parameter | Ratings | Unit |
|-----------|------------------------------|------------|------|
| V_{CBO} | Collector to Base voltage | -50 | V |
| V_{EBO} | Emitter to Base voltage | -5 | V |
| V_{CEO} | Collector to Emitter voltage | -50 | V |
| I_C | Collector current | -1 | A |
| I_{CM} | Peak collector current | -2 | A |
| P_C | Collector dissipation | 500 | mW |
| T_j | Junction temperature | +150 | °C |
| T_{stg} | Storage temperature | -55 ~ +150 | °C |

OUTLINE DRAWING

Unit: mm

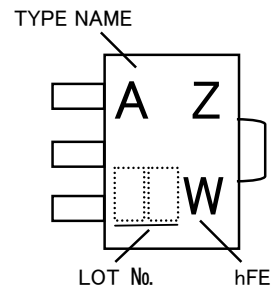


MARKING

TERMINAL CONNECTER

- ①: BASE JEITA:SC-62
②: EMITTER JEDEC:SOT-89
③: COLLECTOR

MARKING



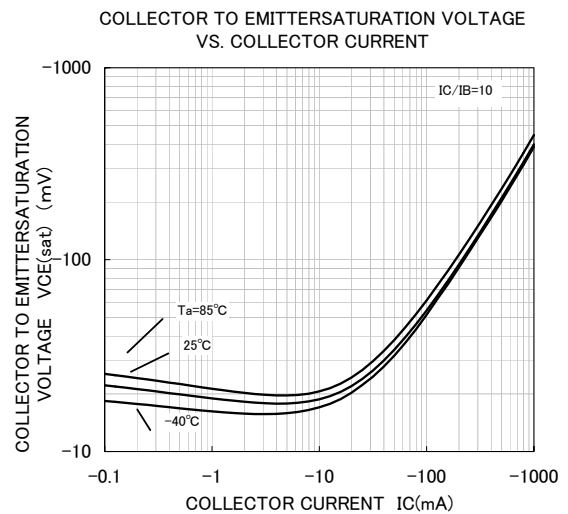
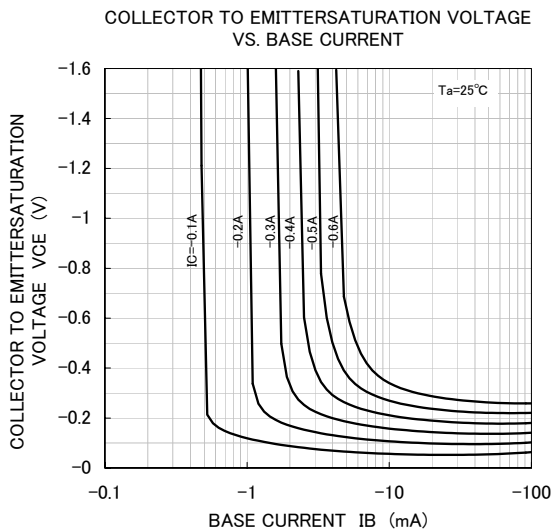
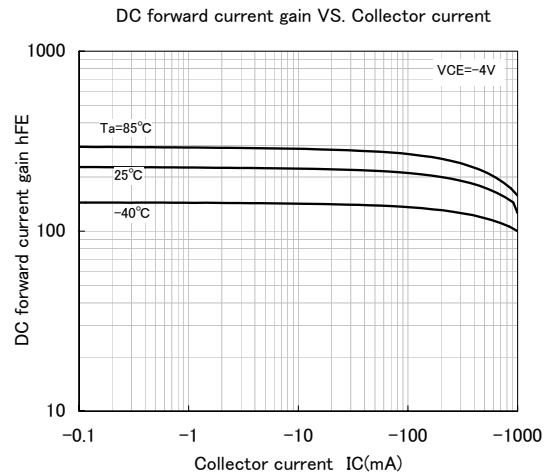
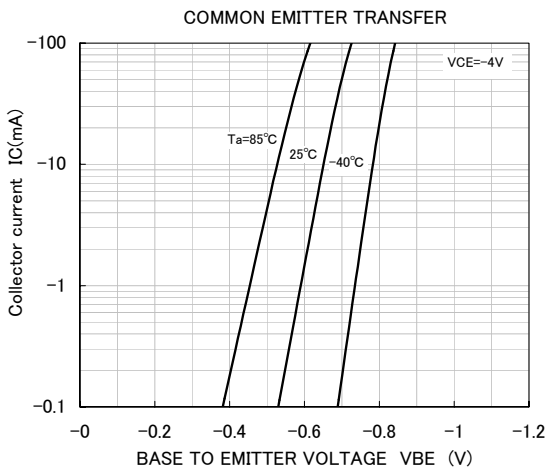
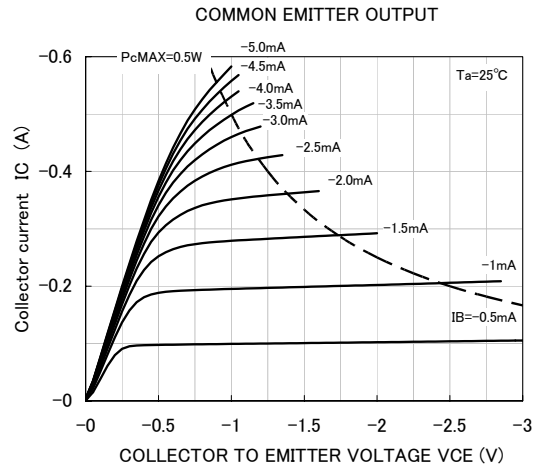
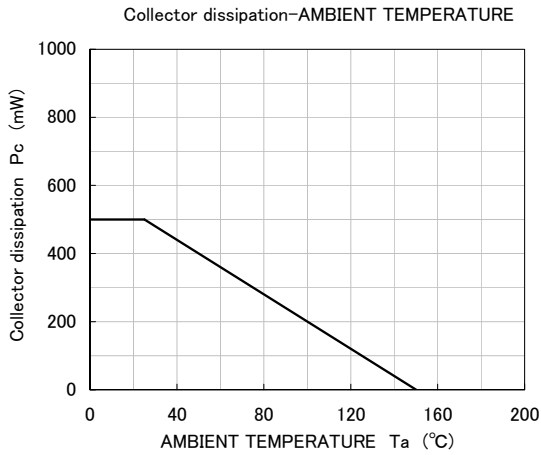
ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Parameter | Symbol | Test conditions | Limits | | | Unit |
|------------------------------|---------------|---|--------|-----|------|---------------|
| | | | Min | Typ | Max | |
| C to B break down voltage | $V(BR)_{CBO}$ | $I_C = -10 \mu\text{A}, I_E = 0\text{mA}$ | -50 | | | V |
| E to B break down voltage | $V(BR)_{EBO}$ | $I_E = -10 \mu\text{A}, I_C = 0\text{mA}$ | -5 | | | V |
| C to E break down voltage | $V(BR)_{CEO}$ | $I_C = -1\text{mA}, R_{BE} = \infty$ | -50 | | | V |
| Collector cut off current | I_{CBO} | $V_{CB} = -50\text{V}, I_E = 0\text{mA}$ | | | -0.1 | μA |
| Emitter cut off current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0\text{mA}$ | | | -0.1 | μA |
| DC forward current gain | hFE | $V_{CE} = -4\text{V}, I_C = -0.1\text{A}$ | 160 | | 380 | - |
| C to E Saturation Voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}, I_B = -50\text{mA}$ | | | -0.5 | V |
| Gain bandwidth product | fT | $V_{CE} = -2\text{V}, I_E = 500\text{mA}$ | | 120 | | MHz |
| Collector output capacitance | Cob | $V_{CB} = -10\text{V}, I_E = 0\text{mA}, f = 1\text{MHz}$ | | 12 | | pF |

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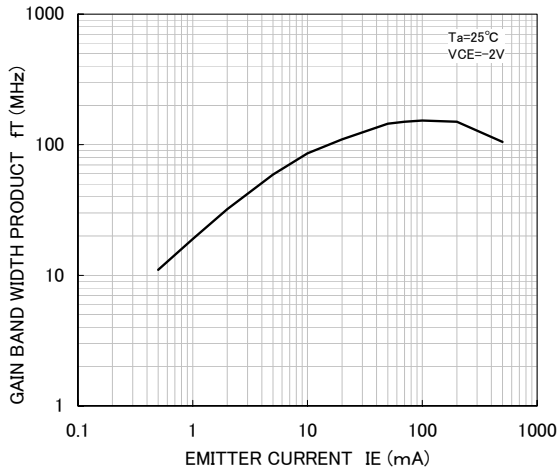
TYPICAL CHARACTERISTICS



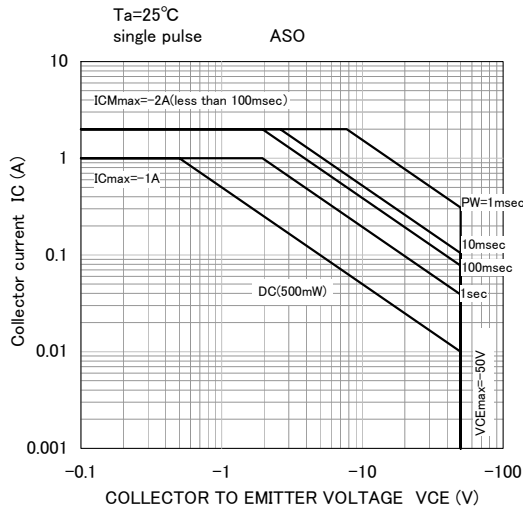
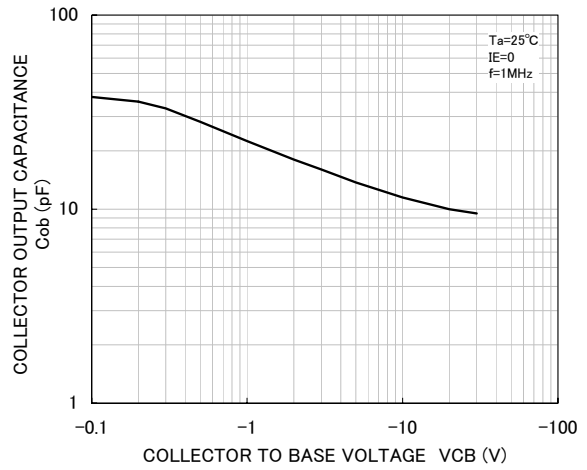
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SILICON PNP EPITAXIAL TYPE

GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





Marketing division, Marketing planning department

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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