

Silicon PNP transistor epitaxial type A5920

[Applications]

Muting and switching with high hFE & low $VCE(sat)$
 Low frequency signal amplifire with less power consumption

[Feature]

High level collector current $IC = -500mA$
 High level DC current gain $hFE = 270 \sim 680$
 Low collector saturation voltage $VCE(sat) = -0.1V(Typ.)$ at $IC = -200mA, IB = -10mA$

[Absolute maximum ratings (Ta=25C)]

| Characteristic | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage | VCBO | -15 | V |
| Collector-emitter voltage | VCEO | -12 | V |
| Emitter-base voltage | VEBO | -6 | V |
| Collector current | IC | -500 | mA |
| Junction temperature | Tj | 150 | C |
| Storage temperature | Tstg | -55 to 150 | C |

[Electrical characteristics (Ta=25C)]

| Characteristic | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|------------|------|------|-------|---------|---------------------------------|
| Collector-base breakdown voltage | BVCBO | -15 | - | - | V | $IC = -10\mu A, IE = 0A$ |
| Collector-emitter breakdown voltage | BVCEO | -12 | - | - | V | $IC = -1mA, IB = 0A$ |
| Emitter-base breakdown voltage | BVEBO | -6 | - | - | V | $IE = -10\mu A, IC = 0A$ |
| Collector cut-off current | ICBO | - | - | -0.1 | μA | $VCB = -15V, IE = 0A$ |
| Emitter cut-off current | IEBO | - | - | -0.1 | μA | $VEB = -6V, IE = 0A$ |
| DC current gain | hFE | 270 | - | 680 | - | $VCE = -2V, IC = -10mA$ |
| Collector-emitter saturation voltage | $VCE(sat)$ | - | -0.1 | -0.25 | V | $IC = -200mA, IB = -10mA$ |
| Transition frequency | f T | - | 260 | - | MHz | $VCE = -2V, IE = 10mA$ |
| Collector output capacitance | Cob | - | 6.5 | - | pF | $VCB = -10V, f = 1MHz, IE = 0A$ |

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.

Fig.1 $V_{BE(on)}$ - I_C
at $V_{CE} = -2V$, $T_a = 25C$

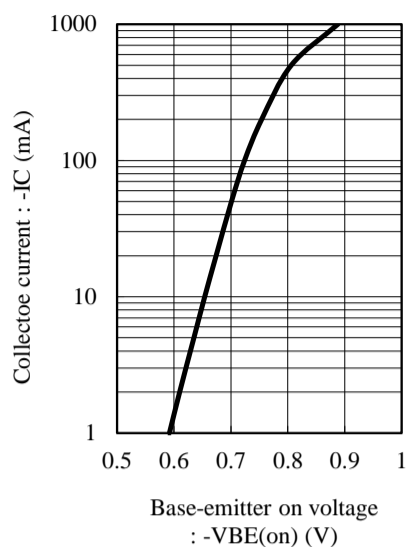


Fig.2 h_{FE} - I_C
at $V_{CE} = -2V$, $T_a = 25C$

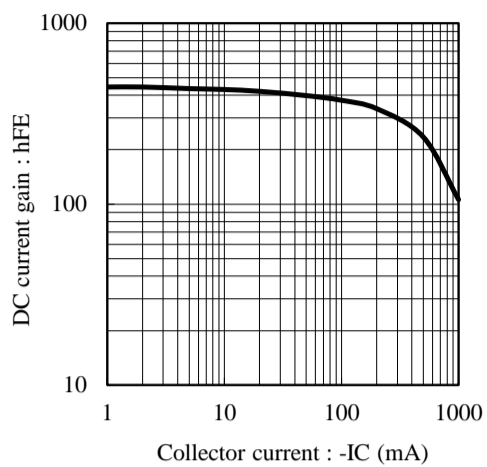


Fig.3 $V_{CE(sat)}$ - I_C
at $I_C/I_B = 20$, $T_a = 25C$

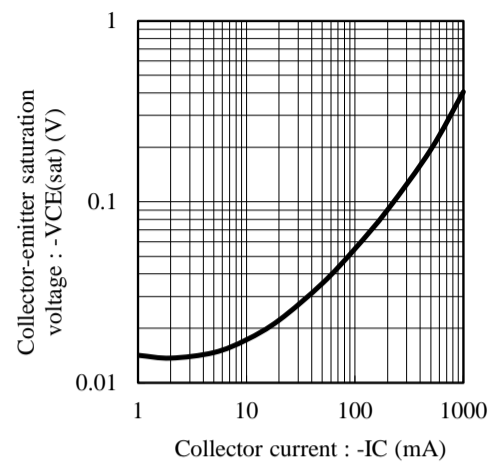


Fig.4 $V_{BE(sat)}$ - I_C
at $I_C/I_B = 20$, $T_a = 25C$

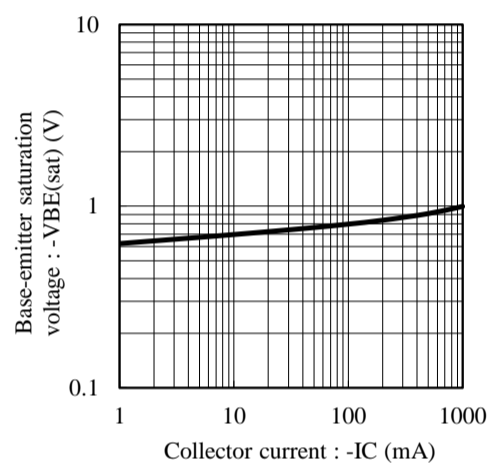


Fig.5 f_T - I_E
at $V_{CE} = -2V$, $T_a = 25C$

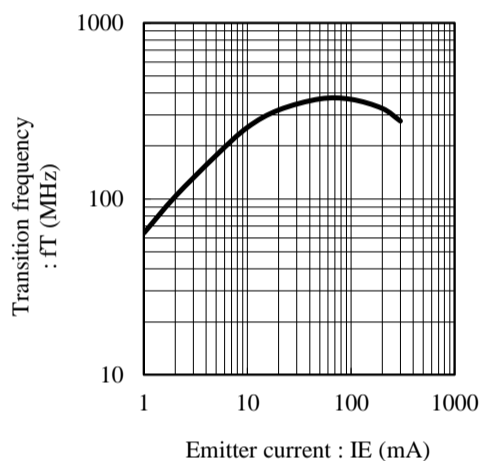


Fig.6 C_{ob} - V_{CB}
at $f = 1MHz$, $T_a = 25C$

