

**Silicon PNP transistor epitaxial type**  
**6A086**
**[ Applications ]**

General purpose

**[ Feature ]**

 Low collector saturation voltage  $V_{CE(sat)} = -0.75V(\text{Max.})$  at  $I_C = -500mA$ ,  $I_B = -50mA$ 
**[ Absolute maximum ratings (Ta=25C) ]**

| Characteristic            | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage    | VCBO   | -40             | V    |
| Collector-emitter voltage | VCEO   | -40             | V    |
| Emitter-base voltage      | VEBO   | -5              | 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           | -40  | -    | -     | V    | $I_C = -10\mu A$ , $I_E = 0A$             |
| Collector-emitter breakdown voltage    | BVCEO           | -40  | -    | -     | V    | $I_C = -10mA$ , $I_B = 0A$                |
| Emitter-base breakdown voltage         | BVEBO           | -5   | -    | -     | V    | $I_E = -10\mu A$ , $I_C = 0A$             |
| DC current gain 1                      | hFE 1           | 30   | -    | -     | -    | $V_{CE} = -1V$ , $I_C = -0.1mA$           |
| DC current gain 2                      | hFE 2           | 60   | -    | -     | -    | $V_{CE} = -1V$ , $I_C = -1mA$             |
| DC current gain 3                      | hFE 3           | 100  | -    | -     | -    | $V_{CE} = -1V$ , $I_C = -10mA$            |
| DC current gain 4                      | hFE 4           | 90   | -    | 365   | -    | $V_{CE} = -2V$ , $I_C = -150mA$           |
| DC current gain 5                      | hFE 5           | 20   | -    | -     | -    | $V_{CE} = -2V$ , $I_C = -500mA$           |
| Collector-emitter saturation voltage 1 | $V_{CE(sat)} 1$ | -    | -    | -0.4  | V    | $I_C = -150mA$ , $I_B = -15mA$            |
| Collector-emitter saturation voltage 2 | $V_{CE(sat)} 2$ | -    | -    | -0.75 | V    | $I_C = -500mA$ , $I_B = -50mA$            |
| Transition frequency                   | fT              | 200  | -    | -     | MHz  | $V_{CE} = -20V$ , $I_E = 50mA$            |
| Collector output capacitance           | Cob             | -    | -    | 10    | pF   | $V_{CB} = -10V$ , $f = 1MHz$ , $I_E = 0A$ |

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 IC - VBE(on)  
at VCE= -2V, Ta= 25C

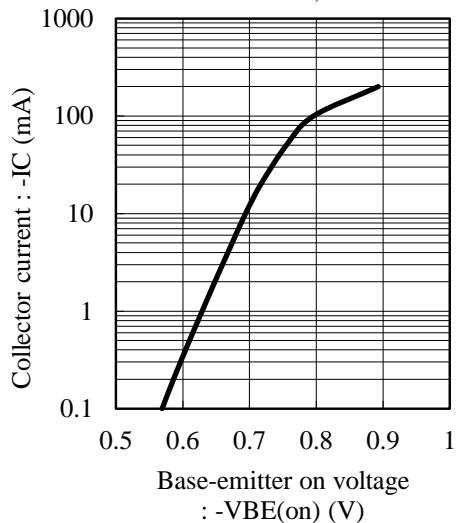


Fig.2 hFE - IC  
at VCE= -1V, Ta= 25C

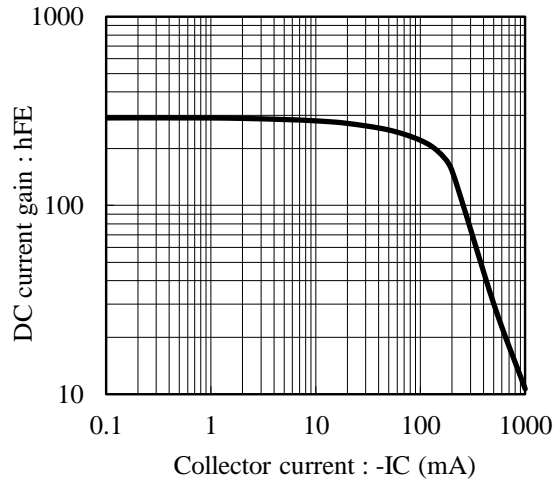


Fig.3 hFE - IC  
at VCE= -2V, Ta= 25C

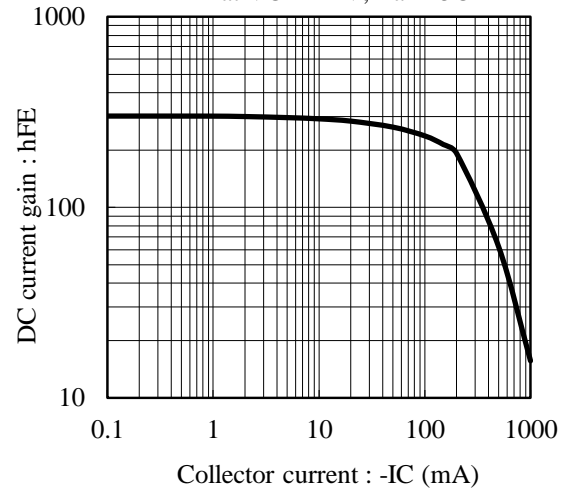


Fig.4 VCE(sat) - IC  
at IC/IB= 10, Ta= 25C

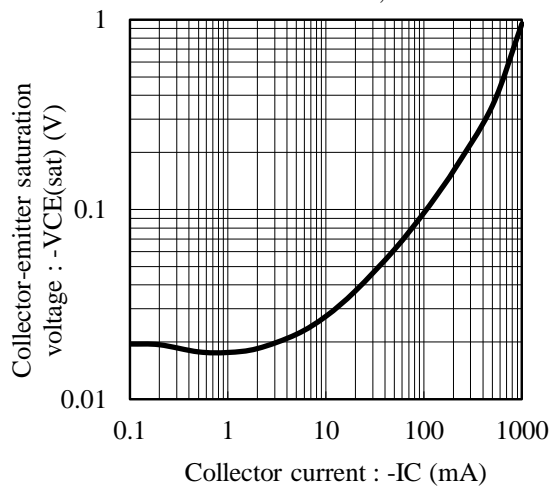


Fig.5 VBE(sat) - IC  
at IC/IB= 10, Ta= 25C

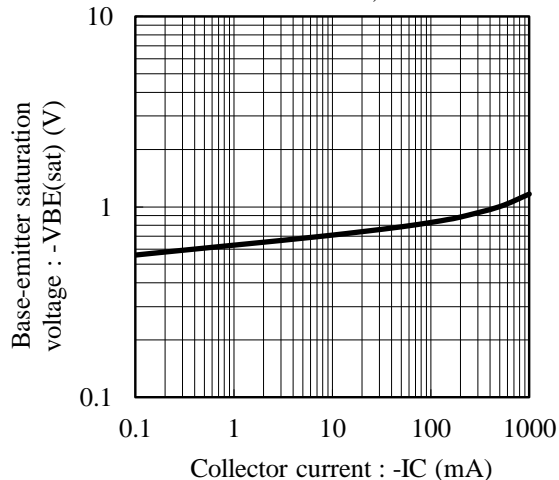


Fig.6 fT - IE  
at VCE= -20V, Ta= 25C

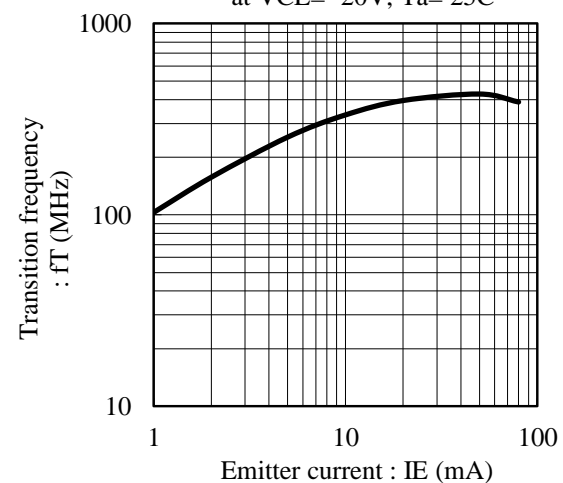


Fig.7 Cob - VCB  
at f= 1MHz, Ta= 25C

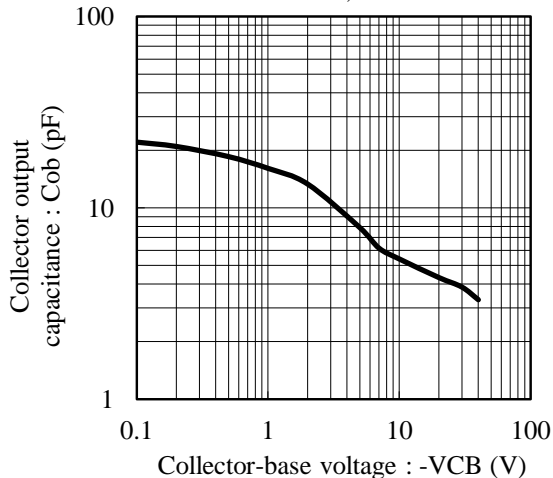


Fig.8 Cib - VEB  
at f= 1MHz, Ta= 25C

