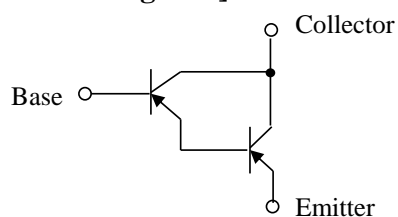


**Silicon PNP transistor epitaxial type (darlington)
B5943**
[Applications]

Motor driver

[Feature]

Darlington connection for a high hFE hFE=20k(min.) at VCE= -5V, IC= -100mA
High input impedance

[Circuit diagram]

[Absolute maximum ratings (Ta=25C)]

| Characteristic | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage | VCBO | -30 | V |
| Collector-emitter voltage | VCEO | -30 | V |
| Emitter-base voltage | VEBO | -10 | 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-emitter breakdown voltage | BVCEO | -30 | - | - | V | IC= -100uA |
| Collector cut-off current | ICBO | - | - | -100 | nA | VCB= -30V |
| Emitter cut-off current | IEBO | - | - | -100 | nA | VEB= -10V |
| DC current gain 1 | hFE 1 | 10k | - | - | - | VCE= -5V, IC= -10mA |
| DC current gain 2 | hFE 2 | 20k | - | - | - | VCE= -5V, IC= -100mA |
| Collector-emitter saturation voltage | VCE(sat) | - | - | -1.5 | V | IC= -100mA, IB= -100uA |
| Base-emitter on voltage | VBE(on) | - | - | -2 | V | VCE= -5V, IC= -100mA |
| Transition frequency | fT | 125 | - | - | MHz | VCE= -5V, IE= 10mA |

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 VBE(on) - IC
at VCE= -5V, Ta= 25C

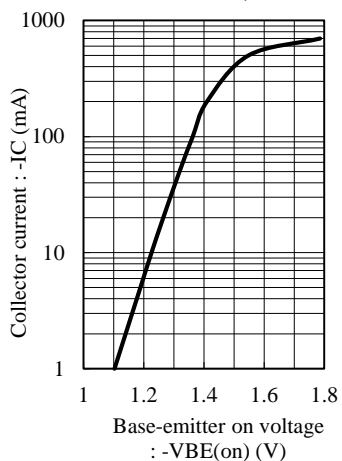


Fig.2 hFE - IC
at VCE= -5V, Ta= 25C

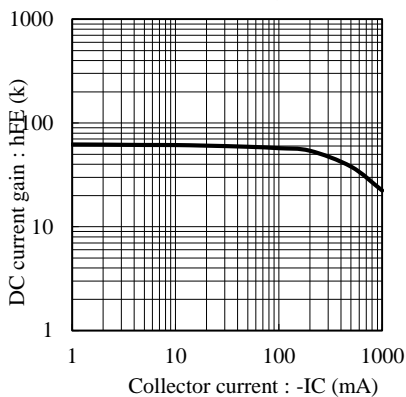


Fig.3 VCE(sat) - IC
at IC/IB= 1000, Ta= 25C

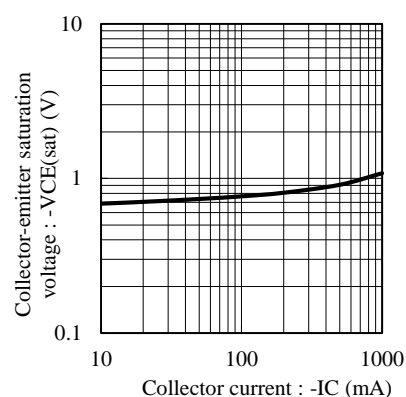


Fig.4 fT - IE
at VCE= -5V, Ta= 25C

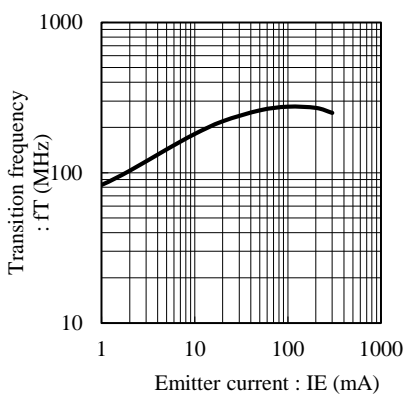


Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C

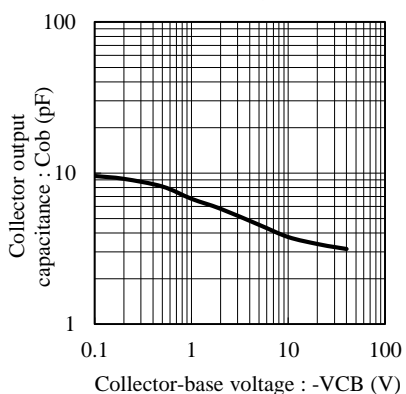


Fig.6 Cib - VEB
at f= 1MHz, Ta= 25C

