

**Silicon NPN transistor triple diffused type
6C999**
[Applications]

High voltage switching and amplifier
 Color TV horizon driver
 Color TV chroma output

[Feature]

High voltage VCEO= 400V
 Small collector output capacitance Cob= 3.0pF (Typ.) at VCB= 20V

[Absolute maximum ratings (Ta=25C)]

| Characteristic | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage | VCBO | 400 | V |
| Collector-emitter voltage | VCEO | 400 | V |
| Emitter-base voltage | VEBO | 7 | V |
| Collector current | IC | 300 | 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 | 400 | - | - | V | IC= 50uA, IE= 0A |
| Collector-emitter breakdown voltage | BVCEO | 400 | - | - | V | IC= 1mA, IB= 0A |
| Emitter-base breakdown voltage | BVEBO | 7 | - | - | V | IE= 50uA, IC= 0A |
| Collector cut-off current | ICBO | - | - | 0.5 | uA | VCB= 400V, IE= 0A |
| DC current gain 1 | hFE 1 | 40 | - | - | - | VCE= 10V, IC= 4mA |
| DC current gain 2 | hFE 2 | 50 | - | 150 | - | VCE= 10V, IC= 20mA |
| Collector-emitter saturation voltage | VCE(sat) | - | - | 0.5 | V | IC= 100mA, IB= 10mA |
| Base-emitter saturation voltage | VBE(sat) | - | - | 1.0 | V | IC= 10mA, IB= 1mA |
| Transition frequency | fT | 50 | - | - | MHz | VCE= 10V, IE= -20mA |
| Collector output capacitance | Cob | - | 3 | - | pF | VCB= 20V, 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.

No. 6C999-20190910

Fig.1 IC - VBE(on)
at VCE=10V, Ta= 25C

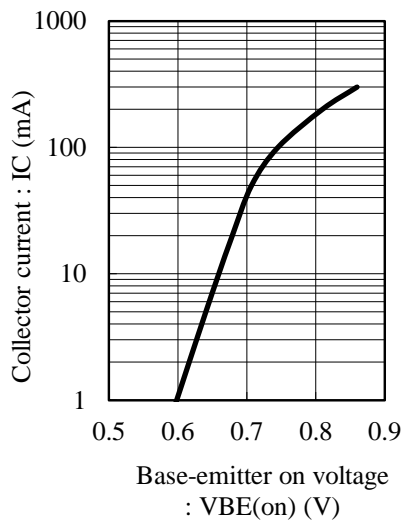


Fig.2 hFE - IC
at VCE= 10V, Ta= 25C

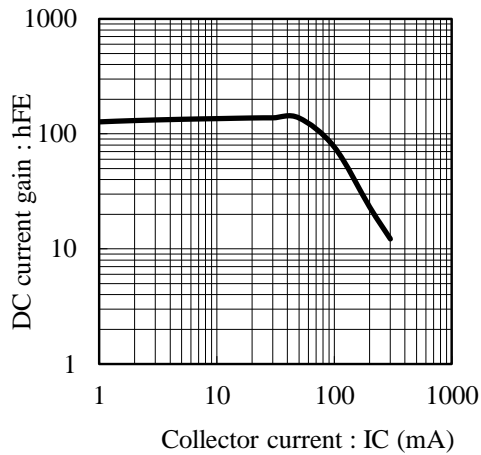


Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

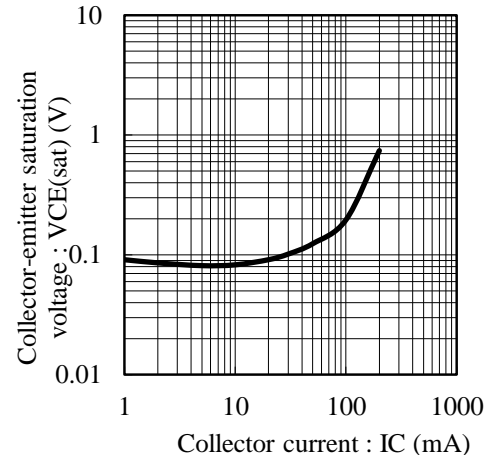


Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

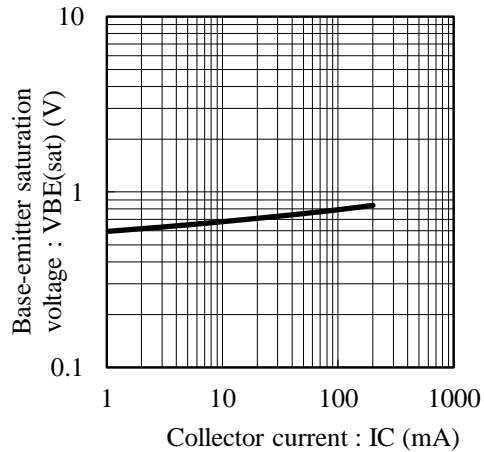


Fig.5 fT - IE
at VCE= 10V, Ta= 25C

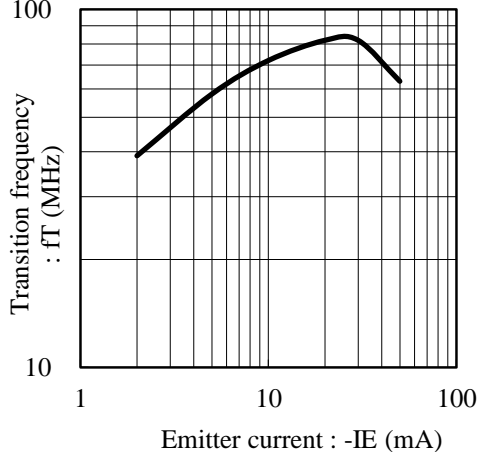


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

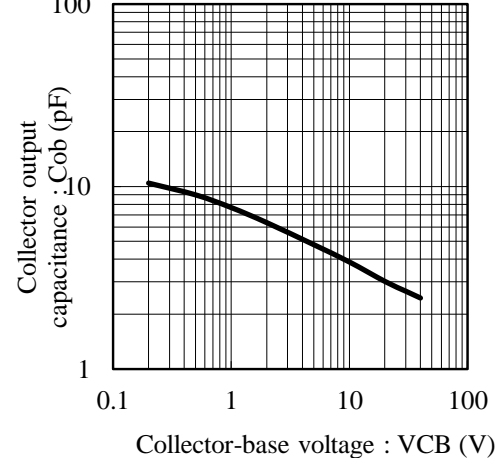


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

