

**Silicon NPN transistor triple diffused type
CP964****[Applications]**

High voltage switching and amplifier

[Feature]

High voltage VCEO= 400V

Small collector output capacitance Cob= 2pF (Typ.) at VCB= 20V

PNP complementary pair with AP964

[Absolute Maximum ratings (Ta=25C)]

| Characteristic | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage | VCBO | 500 | 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 | 500 | - | - | 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= 500V, IE= 0A |
| DC current gain 1 | hFE 1 | 50 | - | - | - | VCE= 10V, IC= 4mA |
| DC current gain 2 | hFE 2 | 60 | - | 200 | - | VCE= 10V, IC= 20mA |
| Collector-emitter saturation voltage | VCE(sat) | - | - | 0.5 | V | IC= 50mA, IB= 5mA |
| Base-emitter saturation voltage | VBE(sat) | - | - | 1.1 | V | IC= 50mA, IB= 5mA |
| Transition frequency | fT | 50 | - | - | MHz | VCE= 10V, IE= -20mA |
| Collector output capacitance | Cob | - | - | 7 | 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.

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

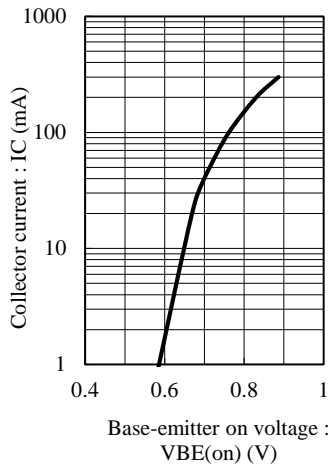


Fig.2 hFE - IC
at VCE= 10V, Ta= 25C

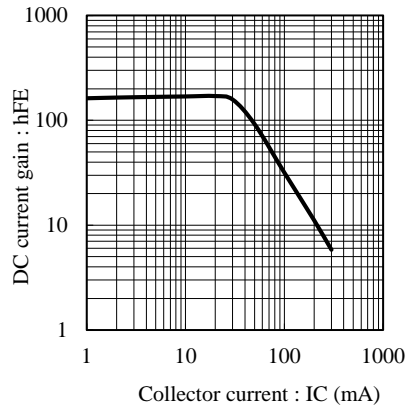


Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

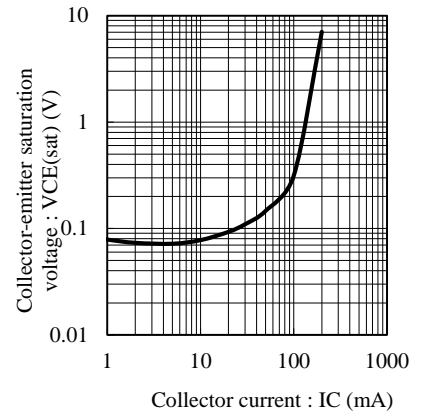


Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

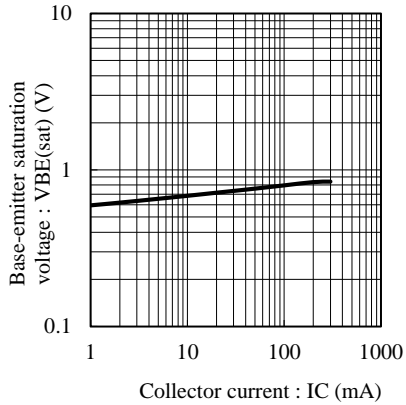


Fig.5 fT - IE
at VCE= 10V, Ta= 25C

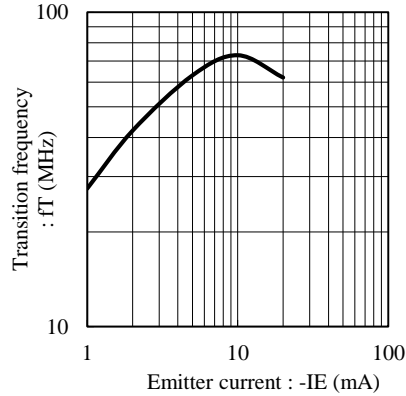


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

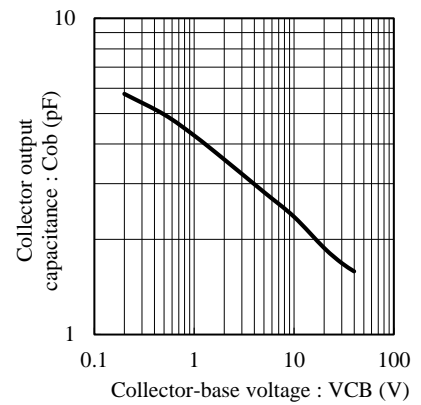


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

