

**Silicon NPN transistor epitaxial type
D5858**
[Applications]

Portable radio 2W output amplifier of class-B push-pull operation
Medium power switching and muting

[Feature]

Correspond to SS8050
High collector current IC= 1.5A
Complimentary pair with phenitec P/N B5858

[Absolute maximum ratings (Ta=25C)]

| Characteristic | Symbol | Maximum ratings | Unit |
|---------------------------|--------|-----------------|------|
| Collector-base voltage | VCBO | 40 | V |
| Collector-emitter voltage | VCEO | 25 | V |
| Emitter-base voltage | VEBO | 6 | V |
| Collector current | IC | 1.5 | A |
| 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 | IC= 100uA, IE= 0A |
| Collector-emitter breakdown voltage | BVCEO | 25 | - | - | V | IC= 2mA, IB= 0A |
| Emitter-base breakdown voltage | BVEBO | 6 | - | - | V | IE= 100uA, IC= 0A |
| Collector cut-off current | ICBO | - | - | 100 | nA | VCB= 40V, IE= 0A |
| Emitter cut-off current | IEBO | - | - | 100 | nA | VEB= 6V, IE= 0A |
| DC current gain 1 | hFE 1 | 45 | - | - | - | VCE= 1V, IC= 5mA |
| DC current gain 2 | hFE 2 | 85 | 160 | 300 | - | VCE= 1V, IC= 100mA |
| DC current gain 3 | hFE 3 | 40 | - | - | - | VCE= 1V, IC= 800mA |
| Collector-emitter saturation voltage | VCE(sat) | - | 0.28 | 0.5 | V | IC= 800mA, IB= 80mA |
| Base-emitter saturation voltage | VBE(sat) | - | 0.98 | 1.2 | V | IC= 800mA, IB= 80mA |
| Base-emitter on voltage | VBE(on) | - | 0.66 | 1 | V | VCE= 1V, IC= 10mA |
| Transition frequency | f T | 100 | 300 | - | MHz | VCE= 10V, IE= -50mA |
| Collector output capacitance | Cob | - | 4.5 | - | 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.

No. D5858-20151204

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

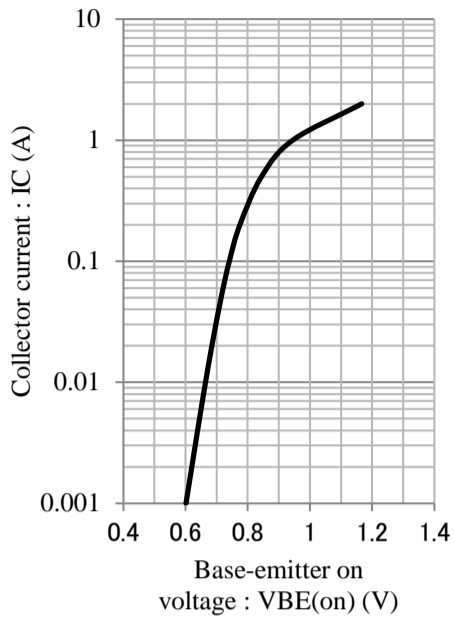


Fig.2 hFE - IC
at VCE= 1V, Ta= 25V

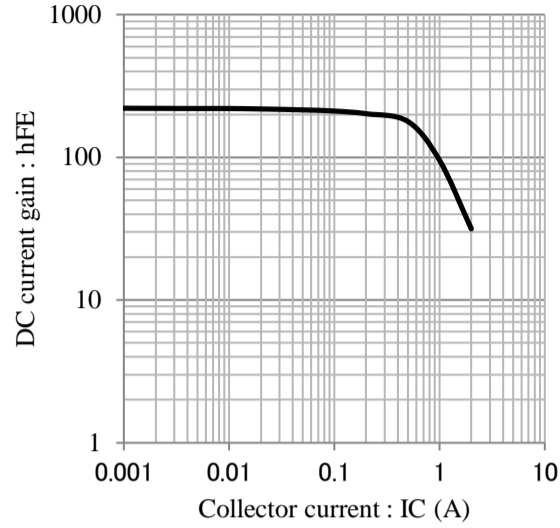


Fig.3 VCE(sat) - IC
at IC/IB=10, Ta= 25C

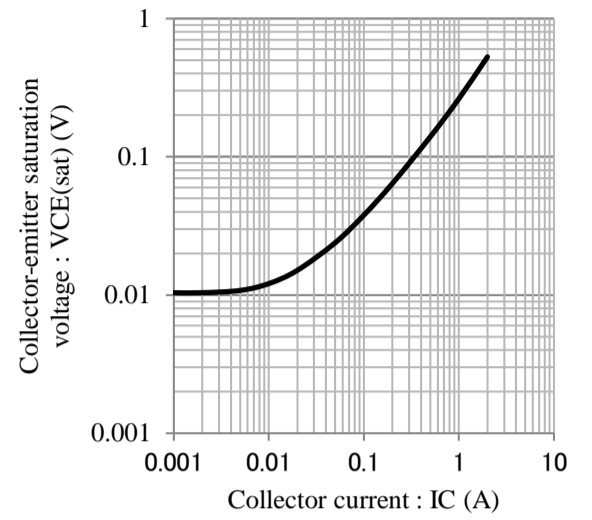


Fig.4 VBE(sat) - IC
at IC/IB=10, Ta= 25C

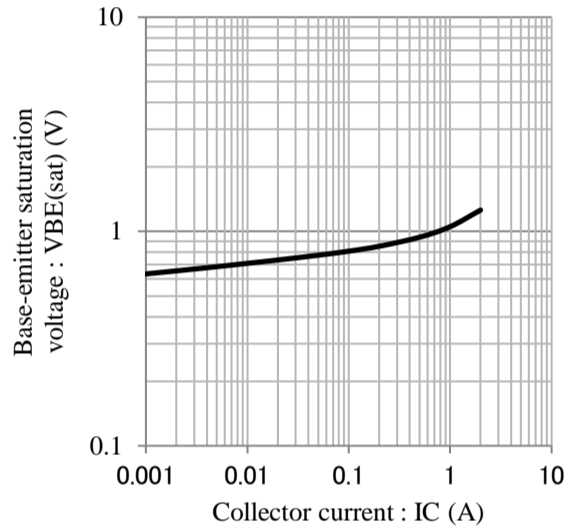


Fig.5 fT - IE
at VCE=10V, Ta=25c

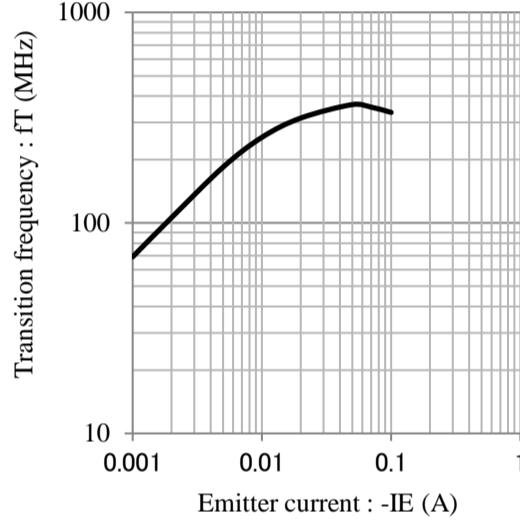


Fig.6 Cob - VCB
at f=1MHz, Ta=25C

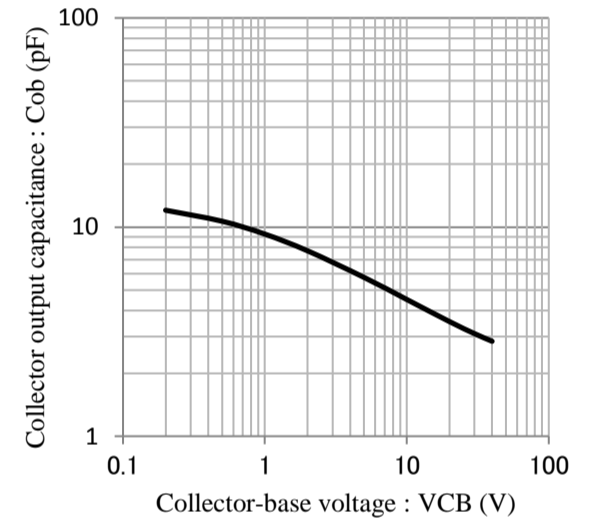


Fig.7 Cib - VEB
at f=1MHz, Ta=25C

