

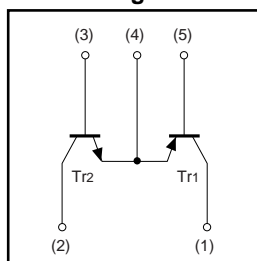
General purpose(dual transistors)

FMY5

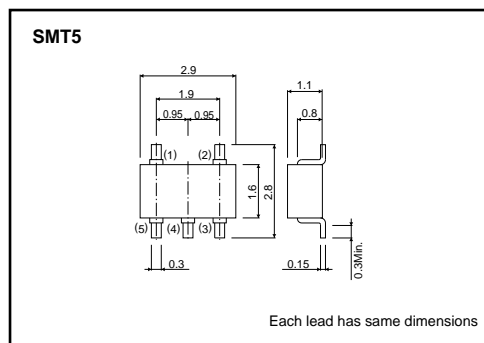
●Features

- 1) Both the 2SA1514K and 2SC3906K chips in an SMT package.
- 2) PNP and NPN chips are connector in a common emitter.

●Circuit diagram



●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|---------------------------|------------------|-------------|------|
| Collector-base voltage | V _{CB0} | 120 | V |
| Collector-emitter voltage | V _{CE0} | 120 | V |
| Emitter-base voltage | V _{EB0} | 5 | V |
| Collector current | I _c | 50 | mA |
| Power dissipation | P _c | 300(TOTAL) | mW * |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

* 200mW per element must not be exceeded. PNP type negative symbols have been omitted.

●Package, marking, and packaging specifications

| | |
|------------------------------|------|
| Part No. | FMY5 |
| Package | SMT5 |
| Marking | Y5 |
| Code | T148 |
| Basic ordering unit (pieces) | 3000 |

Transistor

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|----------------------|------|------|------|------|--|
| Collector-base breakdown voltage | BV _{CB0} | 120 | - | - | V | I _C = 50/-50μA |
| Collector-emitter breakdown voltage | BV _{CEO} | 120 | - | - | V | I _C = 1/-1mA |
| Emitter-base breakdown voltage | BV _{EB0} | 5 | - | - | V | I _E = 50/-50μA |
| Collector cutoff current | I _{CB0} | - | - | 0.5 | μA | V _{CB} = 100/-100V |
| Emitter cutoff current | I _{EB0} | - | - | 0.5 | μA | V _{EB} = 4/-4V |
| DC current transfer ratio | h _{FE} | 180 | - | 820 | - | V _{CE} = 6/-6V, I _C = 2/-2mA |
| Collector-emitter saturation voltage | V _{CE(sat)} | - | - | 0.5 | V | I _C = 10/-10mA, I _B = 1/-1mA |
| Transition frequency | f _T | - | 140 | - | MHz | V _{CE} = 12/-12V, I _E = -2/2mA, f = 100MHz * |
| Output capacitance | C _{ob} | - | 3/4 | - | pF | V _{CB} = 12/-12V, I _E = 0A, f = 1MHz |

Note: The slash denotes NPN/PNP. PNP type negative symbols have been omitted. *Transition frequency of the device.

● Electrical characteristics curves

Tr1

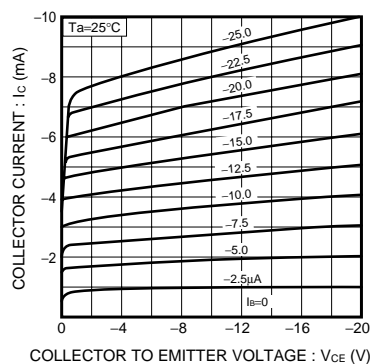


Fig.1 Ground emitter output characteristics

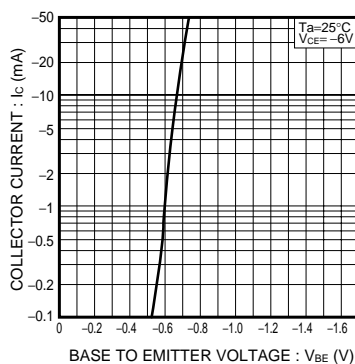


Fig.2 Ground emitter propagation characteristics

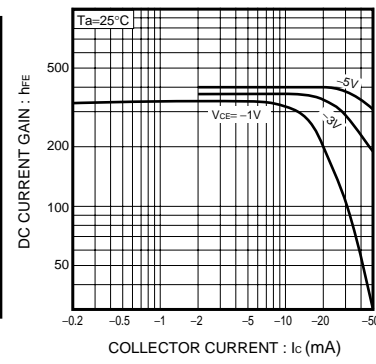


Fig.3 DC current gain vs. collector current

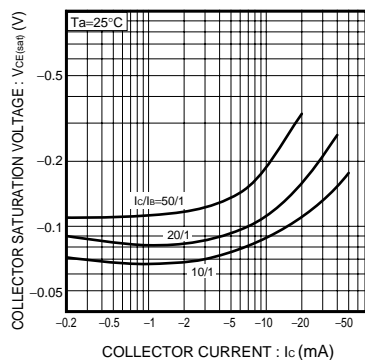


Fig.4 Collector-Emitter saturation voltage vs. collector current

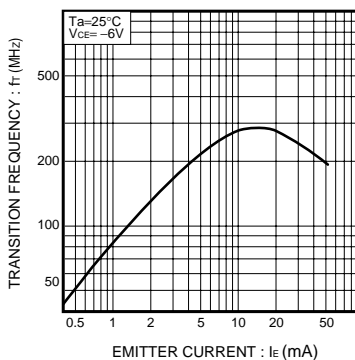


Fig.5 Transition frequency vs. emitter current

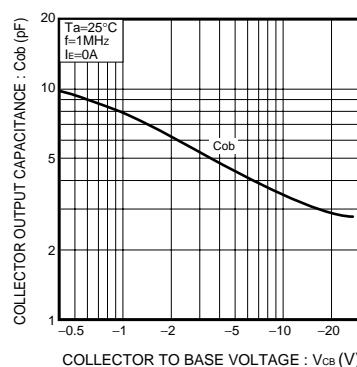


Fig.6 Collector output capacitance vs. collector-base voltage

Transistor

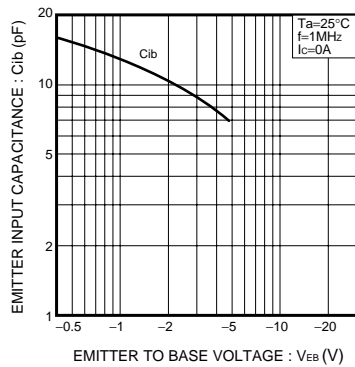


Fig.7 Emitter input capacitance vs. emitter-base voltage

Tr2

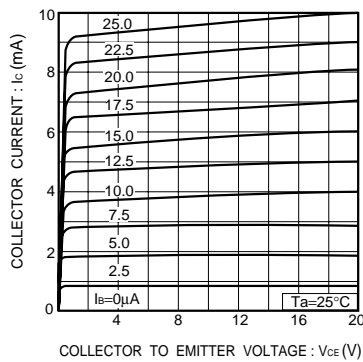


Fig.8 Ground emitter output characteristics

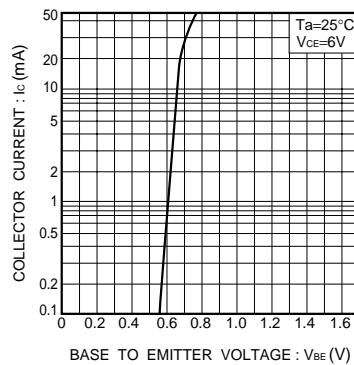


Fig.9 Ground emitter propagation characteristics

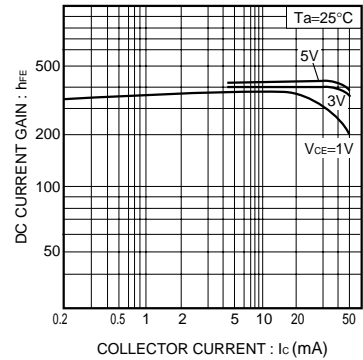


Fig.10 DC current gain vs. collector current

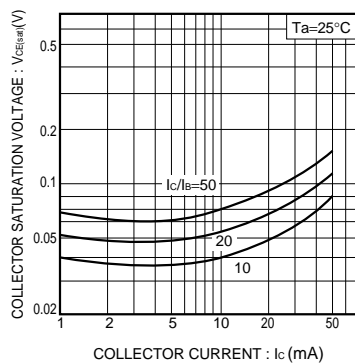


Fig.11 Collector-emitter saturation voltage vs. collector current (I)

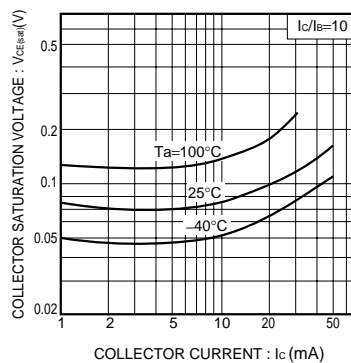


Fig.12 Collector-emitter saturation voltage vs. collector current (II)

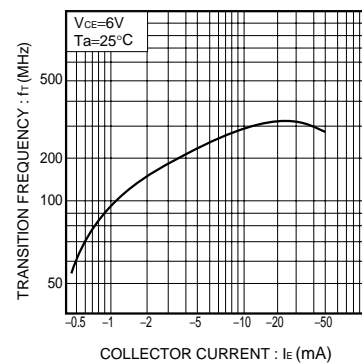


Fig.13 Transition frequency vs. emitter current

Transistor

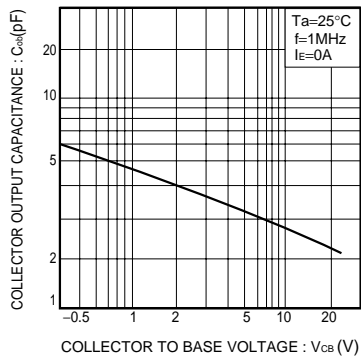


Fig.14 Collector output capacitance vs. collector-base voltage

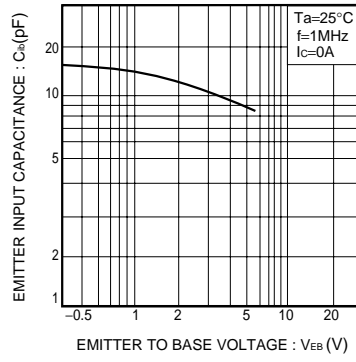


Fig.15 Emitter input capacitance vs. emitter-base voltage

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