

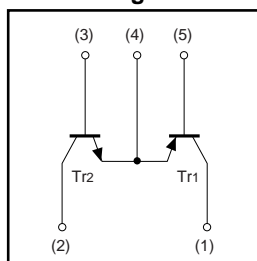
# General purpose(dual transistors)

## FMY5

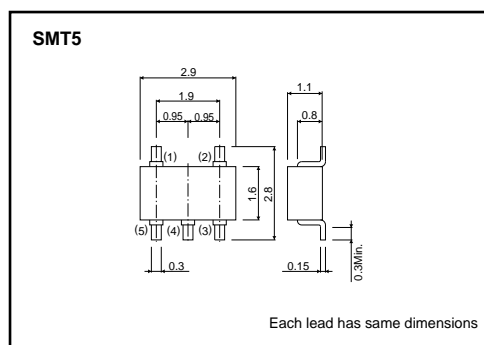
●Features

- 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 <sub>CB0</sub>	120	V
Collector-emitter voltage	V <sub>CE0</sub>	120	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>c</sub>	50	mA
Power dissipation	P <sub>c</sub>	300(TOTAL)	mW *
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-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 <sub>CB0</sub>	120	-	-	V	I <sub>C</sub> = 50/-50μA
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	120	-	-	V	I <sub>C</sub> = 1/-1mA
Emitter-base breakdown voltage	BV <sub>EB0</sub>	5	-	-	V	I <sub>E</sub> = 50/-50μA
Collector cutoff current	I <sub>CB0</sub>	-	-	0.5	μA	V <sub>CB</sub> = 100/-100V
Emitter cutoff current	I <sub>EB0</sub>	-	-	0.5	μA	V <sub>EB</sub> = 4/-4V
DC current transfer ratio	h <sub>FE</sub>	180	-	820	-	V <sub>CE</sub> = 6/-6V, I <sub>C</sub> = 2/-2mA
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-	0.5	V	I <sub>C</sub> = 10/-10mA, I <sub>B</sub> = 1/-1mA
Transition frequency	f <sub>T</sub>	-	140	-	MHz	V <sub>CE</sub> = 12/-12V, I <sub>E</sub> = -2/2mA, f = 100MHz *
Output capacitance	C <sub>ob</sub>	-	3/4	-	pF	V <sub>CB</sub> = 12/-12V, I <sub>E</sub> = 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

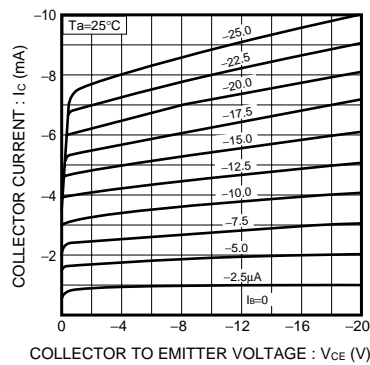


Fig.1 Ground emitter output characteristics

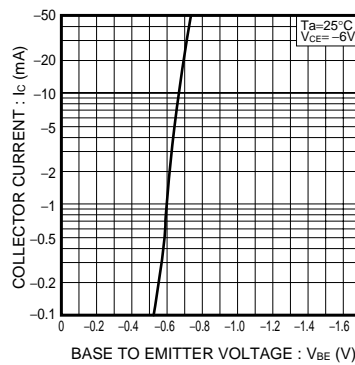


Fig.2 Ground emitter propagation characteristics

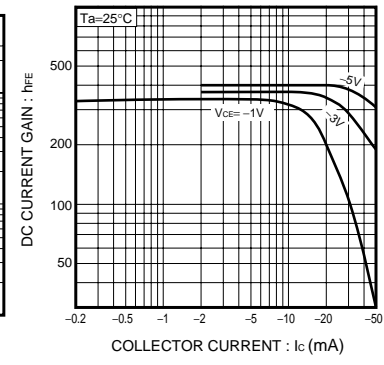


Fig.3 DC current gain vs. collector current

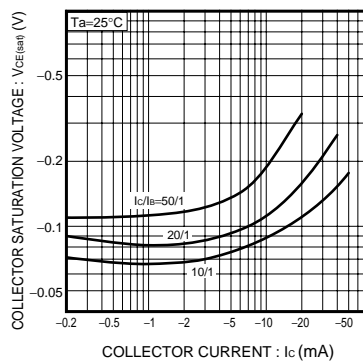


Fig.4 Collector-Emitter saturation voltage vs. collector current

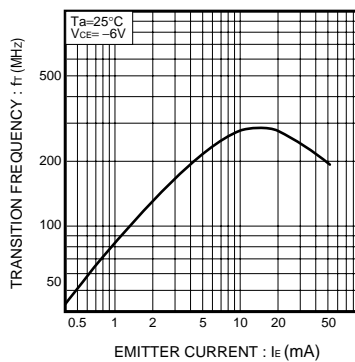


Fig.5 Transition frequency vs. emitter current

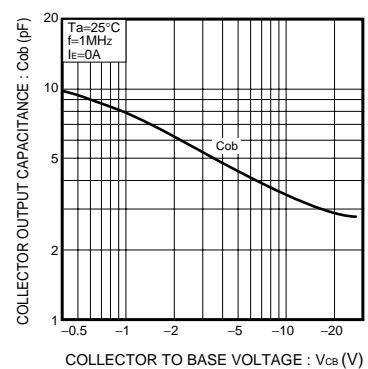


Fig.6 Collector output capacitance vs. collector-base voltage

Transistor

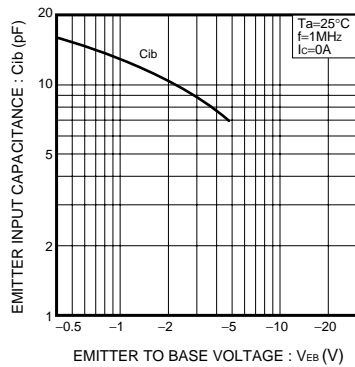


Fig.7 Emitter input capacitance vs. emitter-base voltage

$T_{r2}$

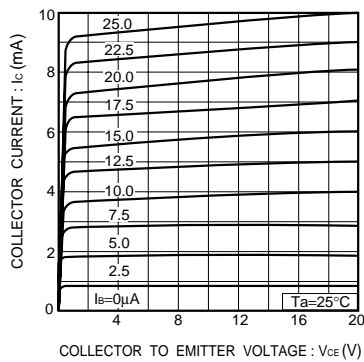


Fig.8 Ground emitter output characteristics

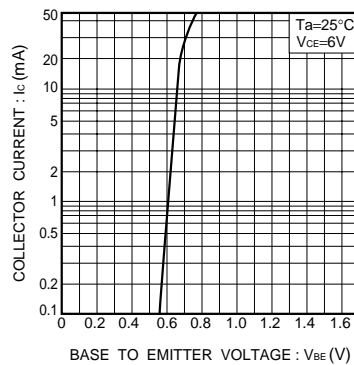


Fig.9 Ground emitter propagation characteristics

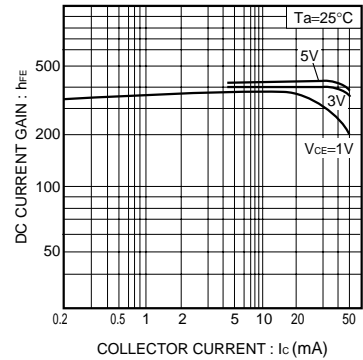


Fig.10 DC current gain vs. collector current

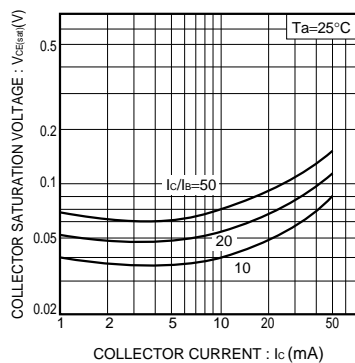


Fig.11 Collector-emitter saturation voltage vs. collector current ( I )

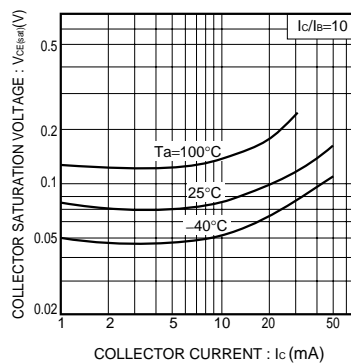


Fig.12 Collector-emitter saturation voltage vs. collector current ( II )

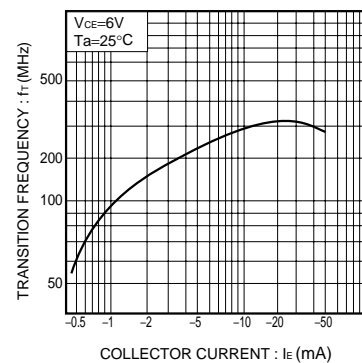


Fig.13 Transition frequency vs. emitter current

Transistor

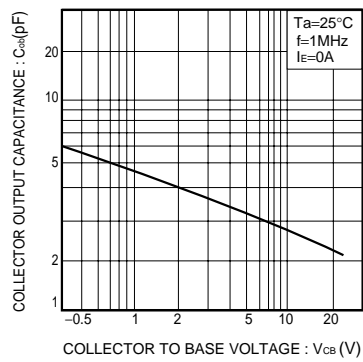


Fig.14 Collector output capacitance vs. collector-base voltage

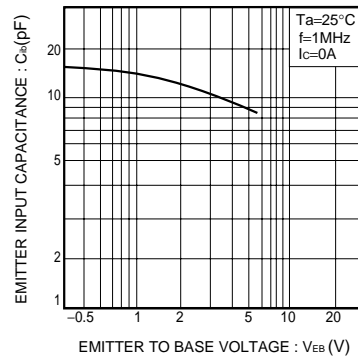


Fig.15 Emitter input capacitance vs. emitter-base voltage

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