

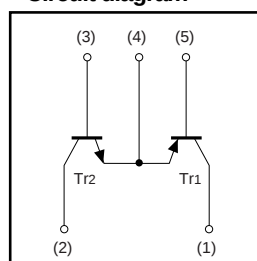
General purpose(dual transistors)

FMY5

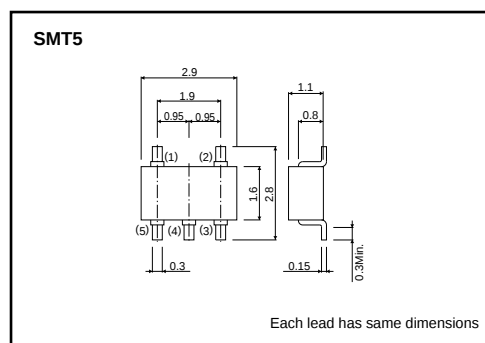
●Features

- 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_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	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_{CBO}	120	—	—	V	$I_C = 50/-50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	120	—	—	V	$I_C = 1/-1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E = 50/-50\mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 100/-100V$
Emitter cutoff current	I_{EBO}	—	—	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	$I_C = 10/-10mA, I_E = 1/-1mA$
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

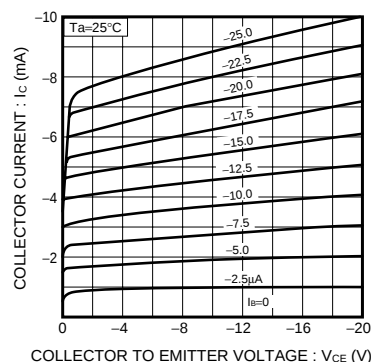


Fig.1 Ground emitter output characteristics

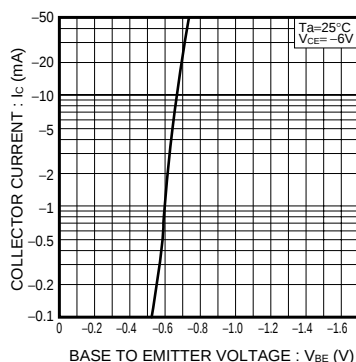


Fig.2 Ground emitter propagation characteristics

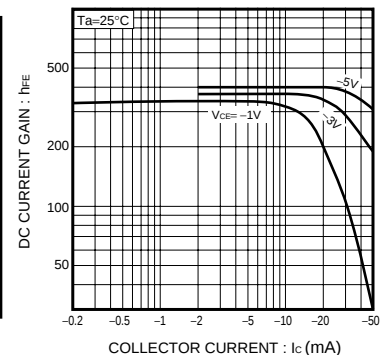


Fig.3 DC current gain vs. collector current

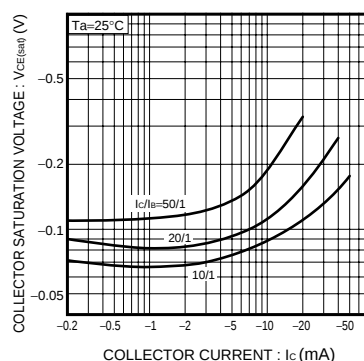


Fig.4 Collector-Emitter saturation voltage vs. collector current

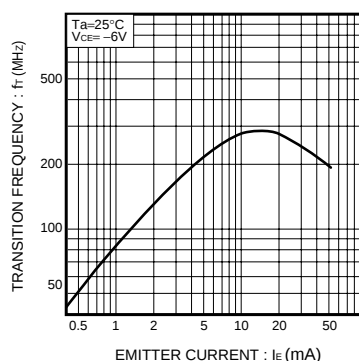


Fig.5 Transition frequency vs. emitter current

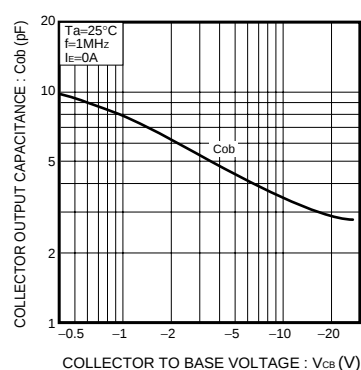


Fig.6 Collector output capacitance vs. collector-base voltage

Transistor

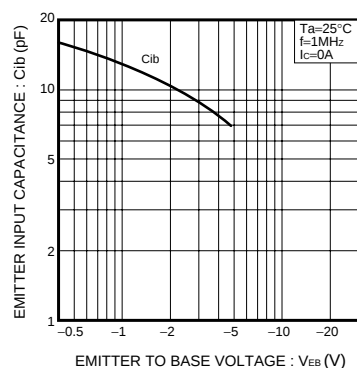


Fig.7 Emitter input capacitance vs. emitter-base voltage

Tr2

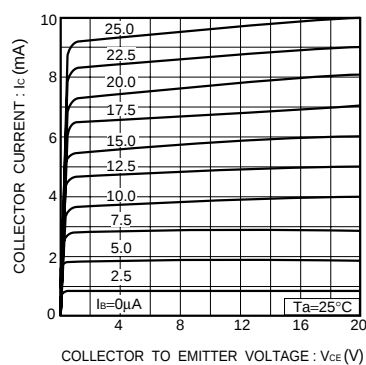


Fig.8 Ground emitter output characteristics

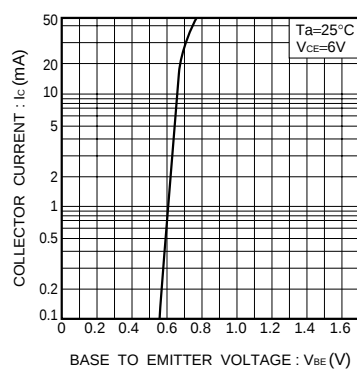


Fig.9 Ground emitter propagation characteristics

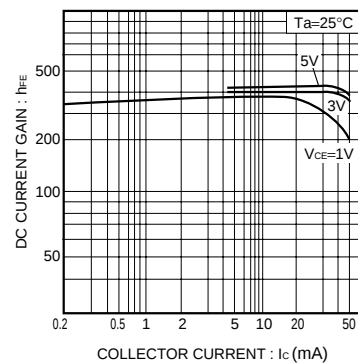


Fig.10 DC current gain vs. collector current

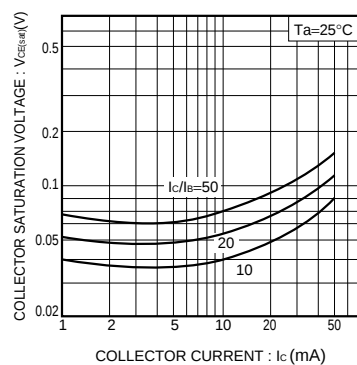


Fig.11 Collector-emitter saturation voltage vs. collector current (I)

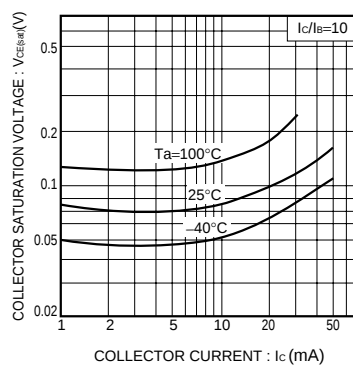


Fig.12 Collector-emitter saturation voltage vs. collector current (II)

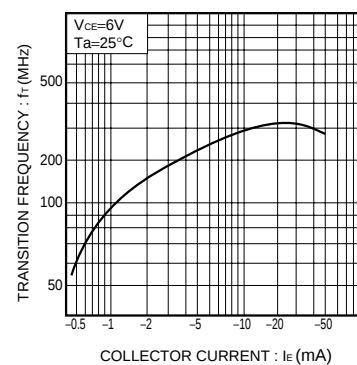


Fig.13 Transition frequency vs. emitter current

Transistor

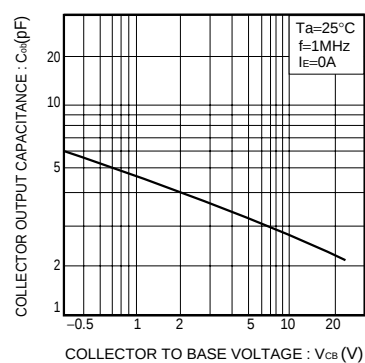


Fig.14 Collector output capacitance vs. collector-base voltage

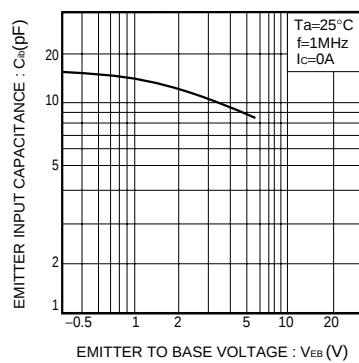


Fig.15 Emitter input capacitance vs. emitter-base voltage

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