

Transistors

General purpose transistor (isolated dual transistors)

IMT17

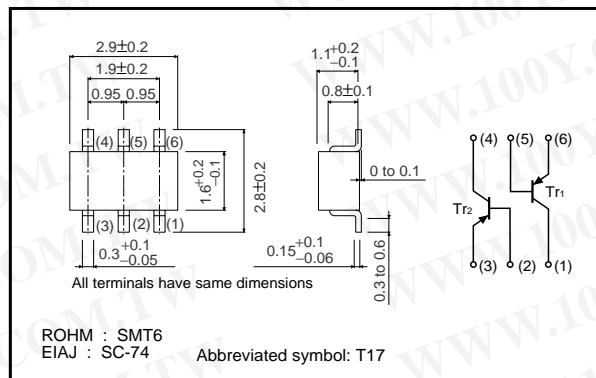
●Applications

General purpose small signal amplifier

●Features

- 1) Two 2SA1036K chips in an SMT package.
- 2) Same size as SMT3 package, so same mounting machine can be used for both.
- 3) Transistor elements are independent, eliminating interference.
- 4) High collector current. $I_c = -500\text{mA}$
- 5) Mounting cost, and area, are reduced by one half.

●External dimensions (Unit : mm)



●Structure

Epitaxial planar type
 PNP silicon transistor

●Packaging specifications

Part No.	Packaging type	Taping
	Code	T110
	Basic ordering unit (pieces)	3000
IMT17		○

The following characteristics apply to both Tr₁ and Tr₂.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	-60	V
Collector-emitter voltage	V _{CE0}	-50	V
Emitter-base voltage	V _{EB0}	-5	V
Collector current	I _c	-500	mA
Power dissipation	P _d	300(TOTAL)	mW *
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* 200mW per element must not be exceeded.

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-60	-	-	V	I _c = -100μA
Collector-emitter breakdown voltage	BV _{CE0}	-50	-	-	V	I _c = -1mA
Emitter-base breakdown voltage	BV _{EB0}	-5	-	-	V	I _E = -100μA
Collector cutoff current	I _{cbo}	-	-	-0.1	μA	V _E = -30V
Emitter cutoff current	I _{EBO}	-	-	-0.1	μA	V _C = -4V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	-0.6	V	I _c /I _E = -500mA/V -50mA
DC current transfer ratio	h _{FE}	120	-	390	-	V _{CE} = -3V, I _c = -100mA *
Transition frequency	f _T	-	200	-	MHz	V _{CE} = -5V, I _E = 20mA, f = 100MHz
Output capacitance	C _{ob}	-	7	-	pF	V _{CB} = -10V, I _E = 0A, f = 1MHz

* Measured using pulse current.

Transistors

●Electrical characteristic curves

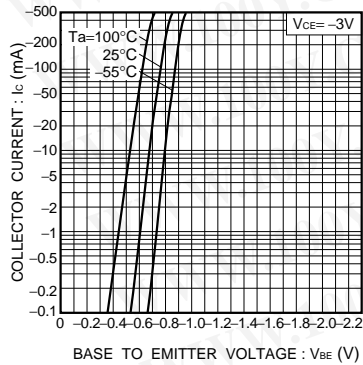


Fig.1 Grounded emitter propagation characteristics

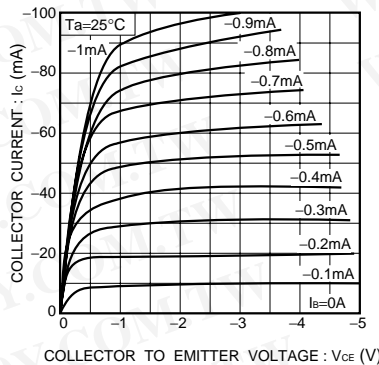


Fig.2 Grounded emitter output characteristics (I)

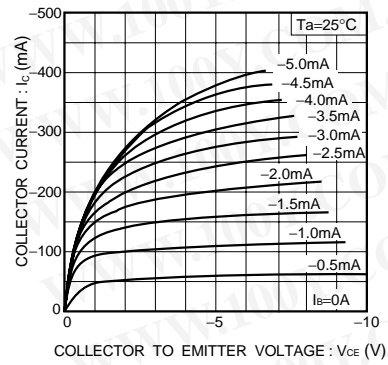


Fig.3 Grounded emitter output characteristics (II)

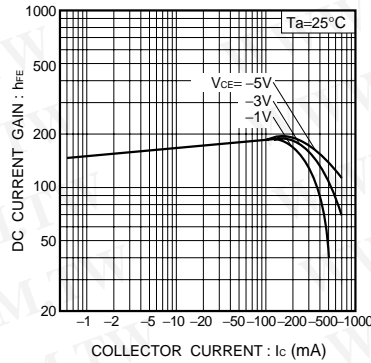


Fig.4 DC current gain vs. collector current (I)

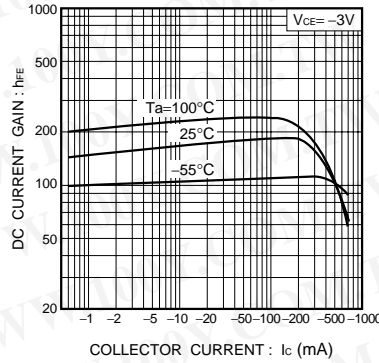


Fig.5 DC current gain vs. collector current (II)

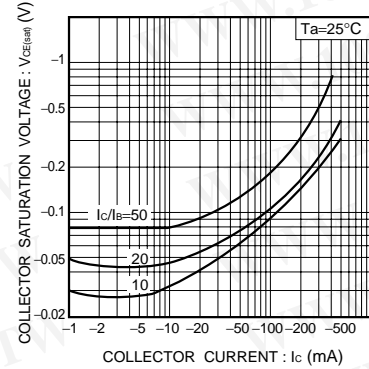


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

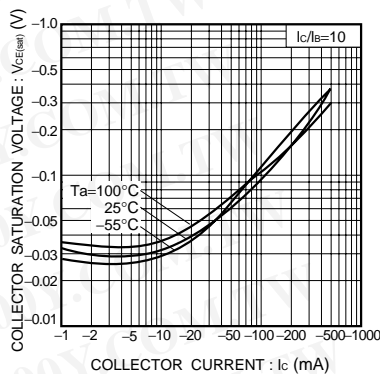


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

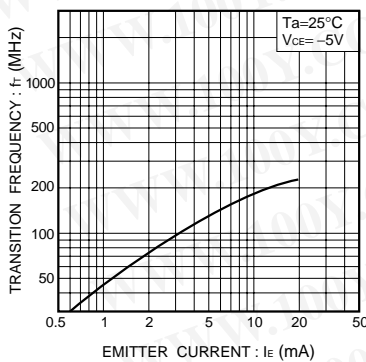


Fig.8 Gain bandwidth product vs. emitter current

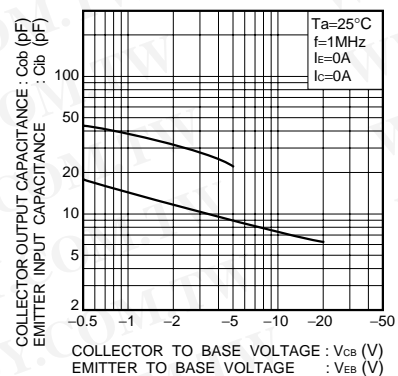


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

Appendix

Notes

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