

Medium Power Transistor (-32V,-05A)

2SA1577

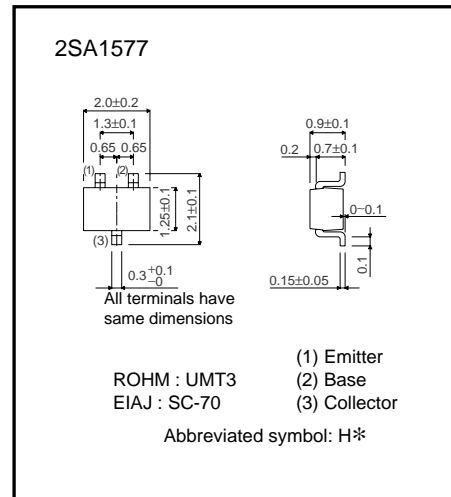
●Features

- 1) Large I_c .
 $I_{cMAX.} = -500mA$
- 2) Low $V_{CE(sat)}$. Ideal for low-voltage operation.
- 3) Complements the 2SC4097.

●Structure

Epitaxial planer type
PNP silicon transistor

●External dimensions (Unit : mm)



* Denotes h_{FE}

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	-40	V
Collector-emitter voltage	V_{CEO}	-32	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_c	-0.5	A *
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

* P_C MAX. must not be exceeded.

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●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CBO}	-40	-	-	V	I _C = -100μA
Collector-emitter breakdown voltage	BV _{CEO}	-32	-	-	V	I _C = -1mA
Emitter-base breakdown voltage	BV _{EBO}	-5	-	-	V	I _E = -100μA
Collector cutoff current	I _{CBO}	-	-	-1	μA	V _{CB} = -20V
Emitter cutoff current	I _{EBO}	-	-	-1	μA	V _{EB} = -4V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	-0.6	V	I _C /I _B = -300mA/-30mA
DC current transfer ratio	h _{FE}	82	-	390	-	V _{CE} = -3V, I _C = -100mA
Transition frequency	f _r	-	200	-	MHz	V _{CE} = -5V, I _E =20mA, f=100MHz
Output capacitance	C _{ob}	-	7	-	pF	V _{CB} = -10V, I _E =0A, f=1MHz

●Packaging specifications

Type	h _{FE}	Package	Taping
2SA1577	PQR	PQR	○
		Code	T106
		Basic ordering unit (pieces)	3000

h_{FE} values are classified as follows.

Item	P	Q	R
h _{FE}	82 to 180	120 to 270	180 to 390

●Electrical characteristic curves

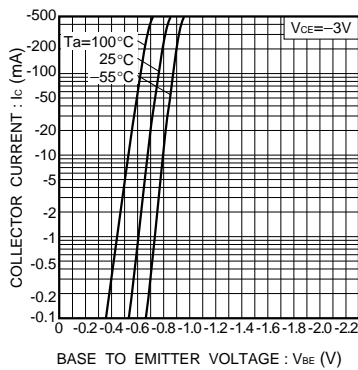


Fig.1 Grounded emitter propagation

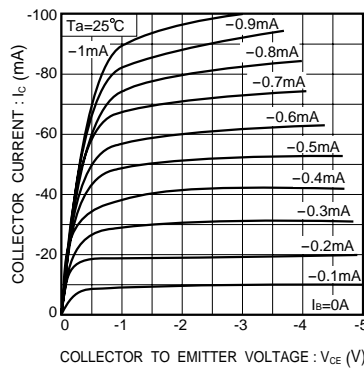


Fig.2 Grounded emitter output characteristics (I)

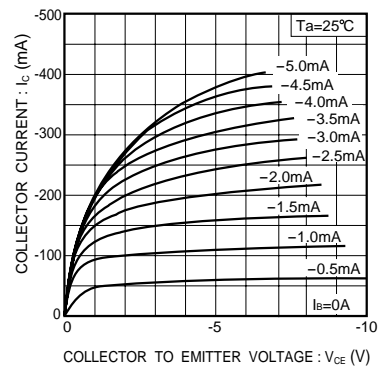


Fig.3 Ground emitter output characteristics (II)

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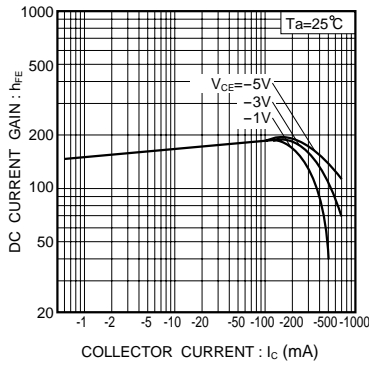


Fig.4 DC current gain vs. collector current (I)

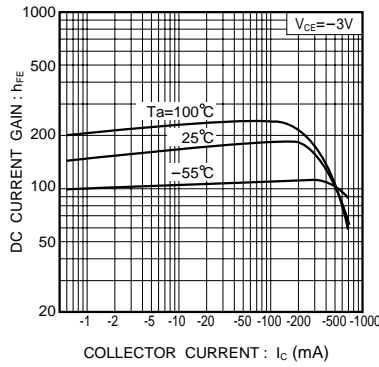


Fig.5 DC current gain vs. collector current (II)

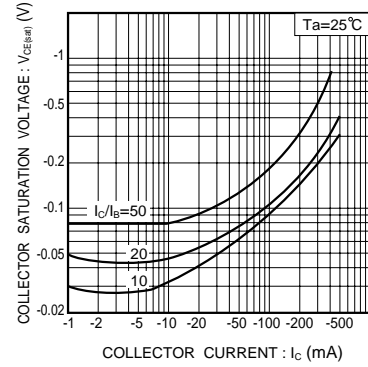


Fig.6 Collector emitter saturation voltage vs. collector current (I)

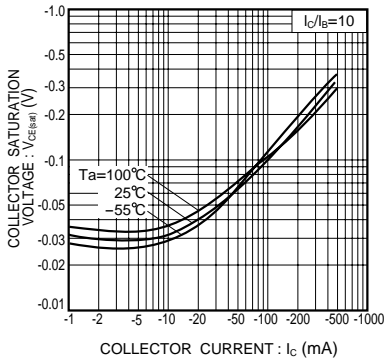


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

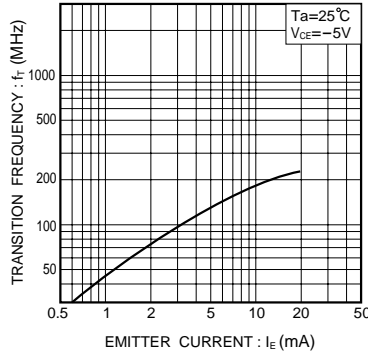


Fig.8 Gain bandwidth product vs. emitter current

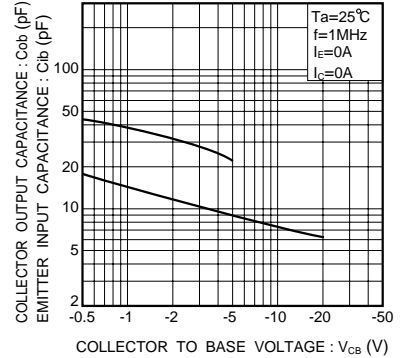


Fig.9 Collector output capacitance vs. collector-base voltage. Emitter input capacitance vs. emitter-base voltage

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