

2SA1748

Silicon PNP epitaxial planar type

For high-frequency amplification

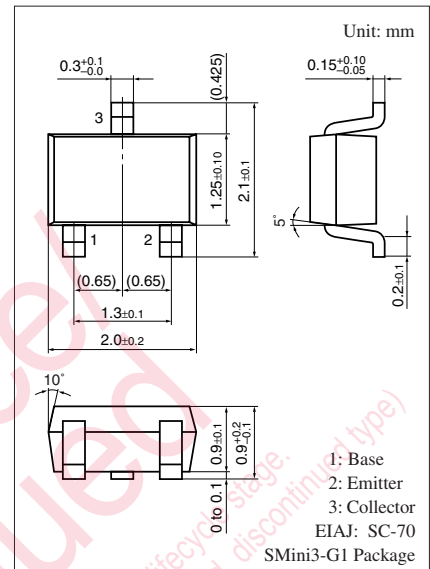
Complementary to 2SC4562

■ Features

- High transition frequency f_T
- Small collector output capacitance C_{ob}
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-50	V
Collector-emitter voltage (Base open)	V_{CEO}	-50	V
Emitter-base voltage (Collector open)	V_{EBO}	-5	V
Collector current	I_C	-50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: AL

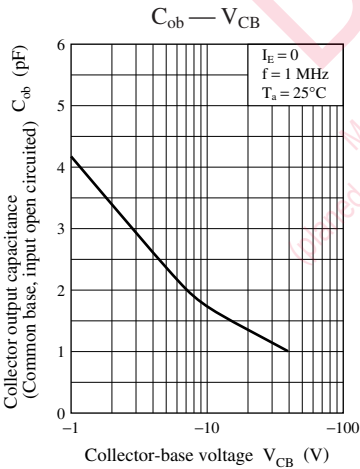
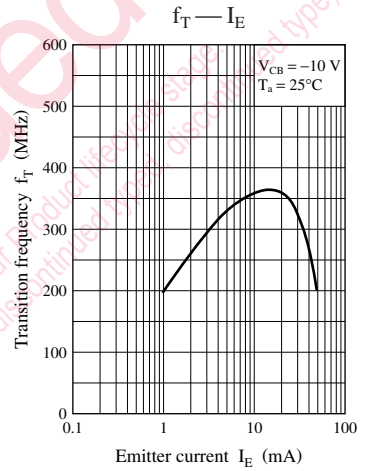
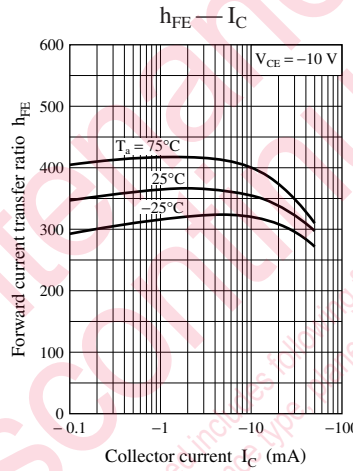
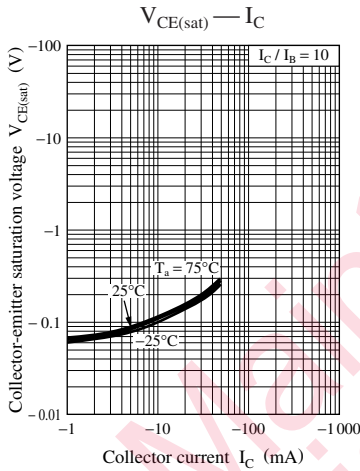
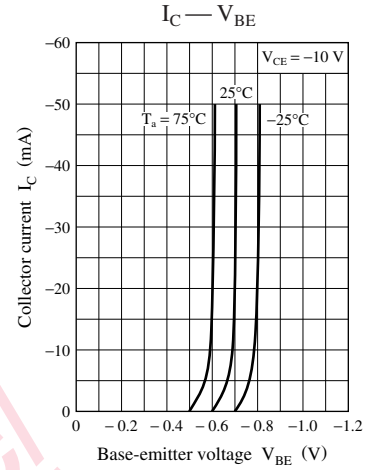
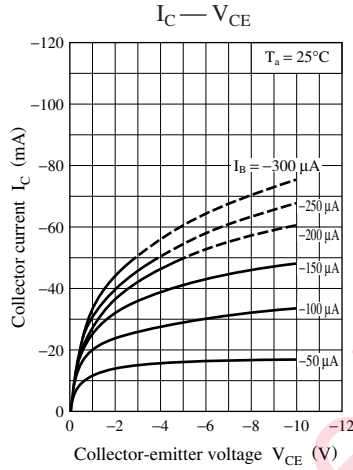
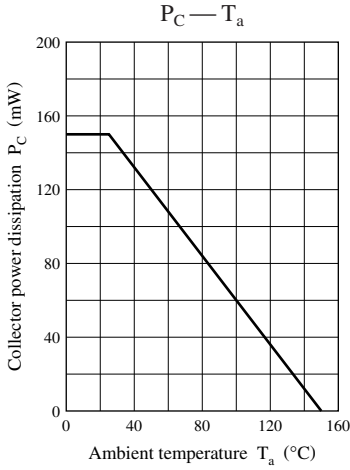
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1 \text{ mA}, I_B = 0$	-50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10 \text{ V}, I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -10 \text{ V}, I_B = 0$			-100	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = -10 \text{ V}, I_C = -2 \text{ mA}$	200		500	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$		-0.1	-0.3	V
Transition frequency	f_T	$V_{CB} = -10 \text{ V}, I_E = 2 \text{ mA}, f = 200 \text{ MHz}$		250		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		1.5		pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	Q	R
h_{FE}	200 to 400	250 to 500



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