Transistors

# 2SA1748

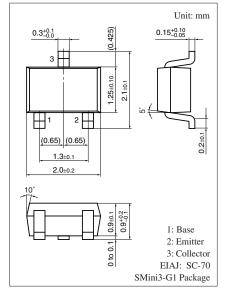
### Silicon PNP epitaxial planar type

For high-frequency amplification Complementary to 2SC4562

#### Features

- $\bullet$  High transition frequency  $f_{\rm T}$
- $\bullet$  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 $T_a = 25^{\circ}C$						
Parameter	Symbol	Rating	Unit			
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	-50	V			
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	-50	V			
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	-5	V			
Collector current	I <sub>C</sub>	-50	mA			
Collector power dissipation	P <sub>C</sub>	150	mW			
Junction temperature	Tj	150	°C			
Storage temperature	T <sub>stg</sub>	-55 to +150	°C			



#### Marking Symbol: AL

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

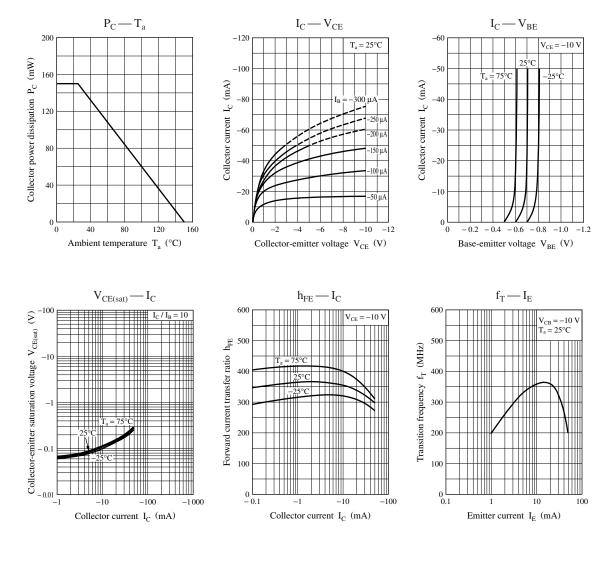
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = -10 \ \mu A, \ I_{\rm E} = 0$	-50			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = -1  {\rm mA},  I_{\rm B} = 0$	-50			V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	$I_{\rm E} = -10 \ \mu A, \ I_{\rm C} = 0$	-5			V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = -10 \text{ V}, I_E = 0$			- 0.1	μΑ
Collector-emitter cutoff current (Base open)	I <sub>CEO</sub>	$V_{CE} = -10 \text{ V}, I_B = 0$			-100	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = -10 \text{ V}, I_C = -2 \text{ mA}$	200		500	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = -10 \text{ mA}, I_{\rm B} = -1 \text{ mA}$		- 0.1	- 0.3	V
Transition frequency	f <sub>T</sub>	$V_{CB} = -10 \text{ V}, I_E = 2 \text{ mA}, f = 200 \text{ MHz}$		250		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		1.5		pF
(Common base, input open circuited)						

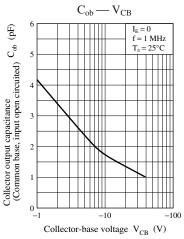
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	Q	R
h <sub>FE</sub>	200 to 400	250 to 500

### Panasonic





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