

# 2SA1748

## Silicon PNP epitaxial planer type

For high-frequency amplification

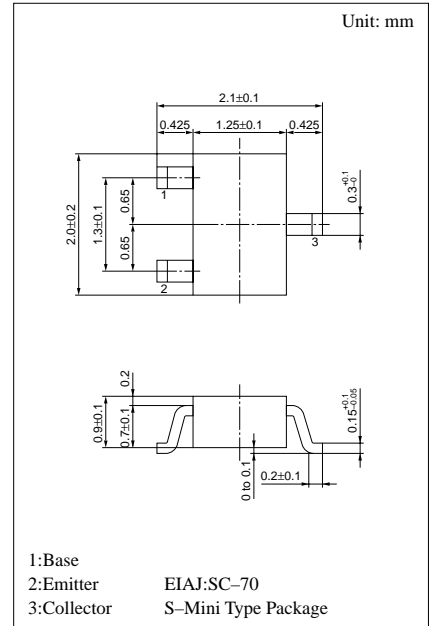
Complementary to 2SC4562

### 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 (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-50	V
Collector to emitter voltage	$V_{CEO}$	-50	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C



Marking symbol : AL

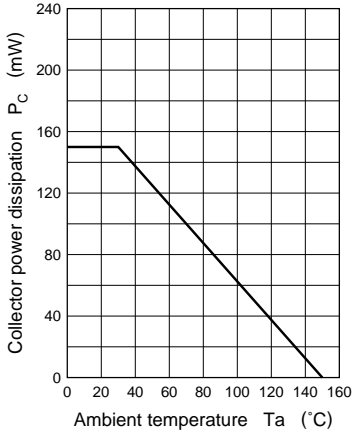
### Electrical Characteristics (Ta=25°C)

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

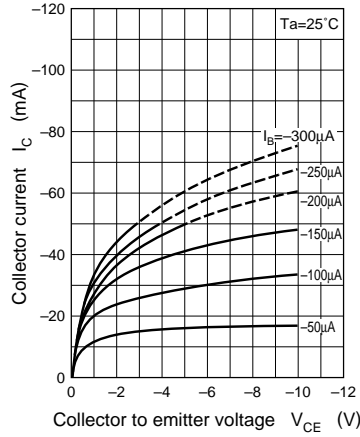
\* $h_{FE}$  Rank classification

Rank	Q	R
$h_{FE}$	200 ~ 400	250 ~ 500
Marking Symbol	ALQ	ALR

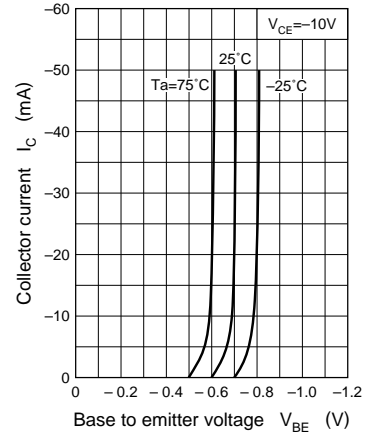
$P_C - T_a$



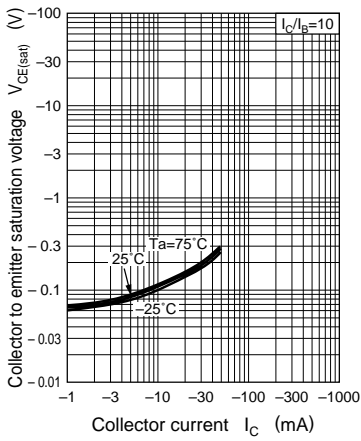
$I_C - V_{CE}$



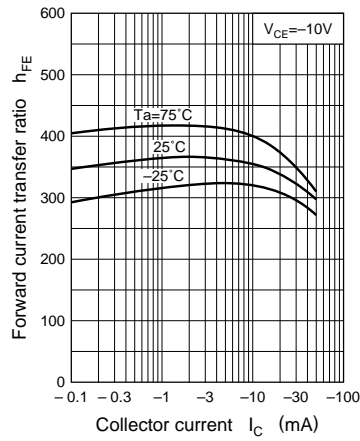
$I_C - V_{BE}$



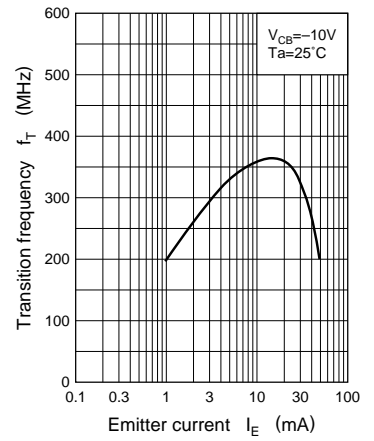
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

