

# 2SA1034, 2SA1035

## Silicon PNP epitaxial planer type

For low-frequency and low-noise amplification

Complementary to 2SC2405 and 2SC2406

### Features

- Low noise voltage NV.
- High forward current transfer ratio  $h_{FE}$ .
- 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	$V_{CBO}$	2SA1034 -35	V
2SA1035		-55	
Collector to emitter voltage	$V_{CEO}$	2SA1034 -35	V
2SA1035		-55	
Emitter to base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-100	mA
Collector current	$I_C$	-50	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

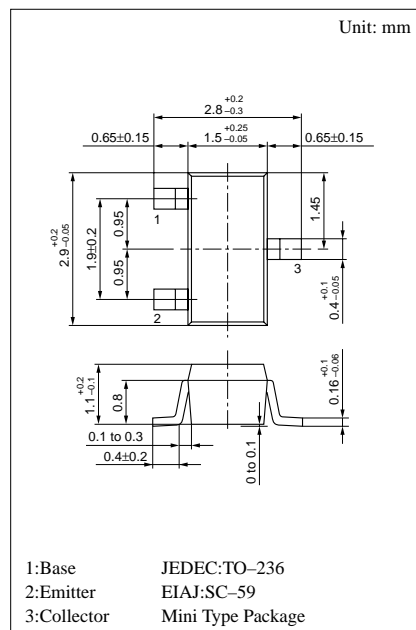
### Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -10V, I_E = 0$			-100	nA
	$I_{CEO}$	$V_{CE} = -10V, I_B = 0$			-1	μA
Collector to base voltage	$V_{CBO}$	$I_C = -10\mu A, I_E = 0$	2SA1034 -35			V
			2SA1035 -55			
Collector to emitter voltage	$V_{CEO}$	$I_C = -2mA, I_B = 0$	2SA1034 -35			V
			2SA1035 -55			
Emitter to base voltage	$V_{EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Forward current transfer ratio	$h_{FE}^{*1}$	$V_{CE} = -5V, I_C = -2mA$	180		700	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA^{*2}$		-0.7	-0.6	V
Base to emitter voltage	$V_{BE}$	$V_{CE} = -1V, I_C = -100mA^{*2}$		200	-1.0	V
Transition frequency	$f_T$	$V_{CB} = -5V, I_E = 2mA, f = 200MHz$				MHz
Noise voltage	NV	$V_{CE} = -10V, I_C = -1mA, G_v = 80dB$ $R_g = 100k\Omega, \text{Function} = \text{FLAT}$			150	mV

<sup>\*1</sup> $h_{FE1}$  Rank classification

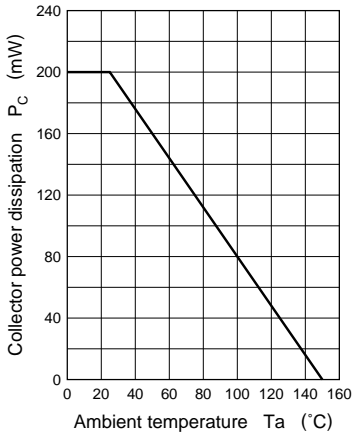
<sup>\*2</sup> Pulse measurement

Rank	R	S	T
$h_{FE}$	180 ~ 360	260 ~ 520	360 ~ 700
Marking	2SA1034	FR	FS
Symbol	2SA1035	HR	HT

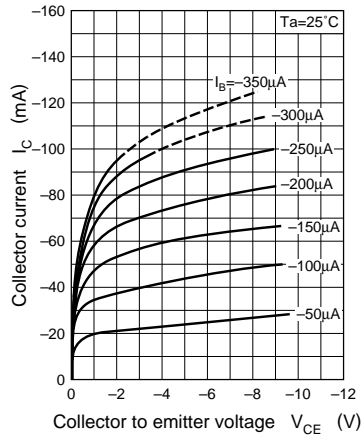


Marking symbol : F(2SA1034)  
H(2SA1035)

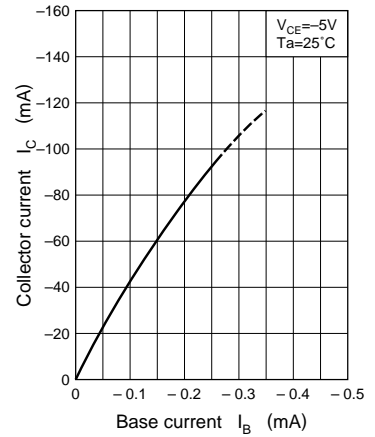
$P_C - T_a$



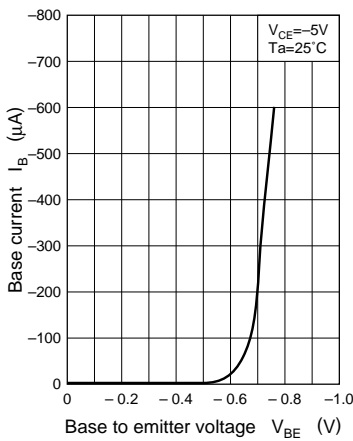
$I_C - V_{CE}$



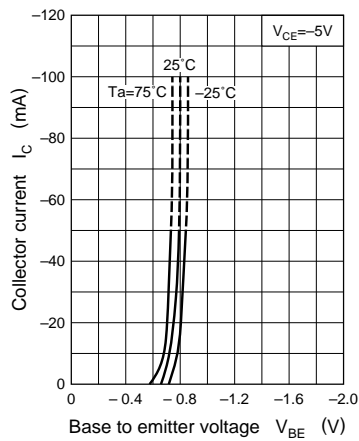
$I_C - I_B$



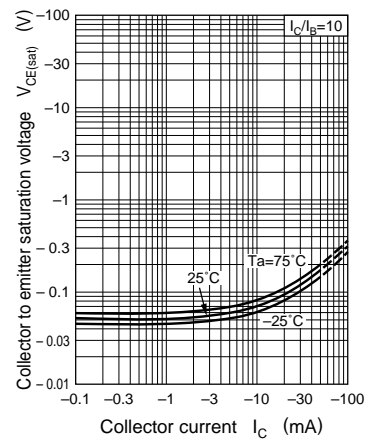
$I_B - V_{BE}$



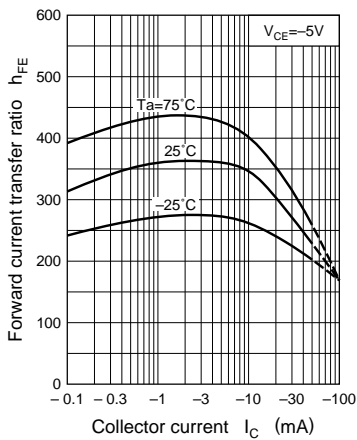
$I_C - V_{BE}$



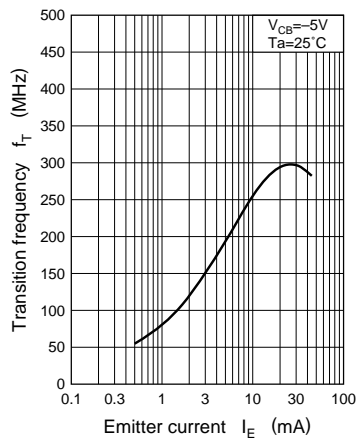
$V_{CE(sat)} - I_C$



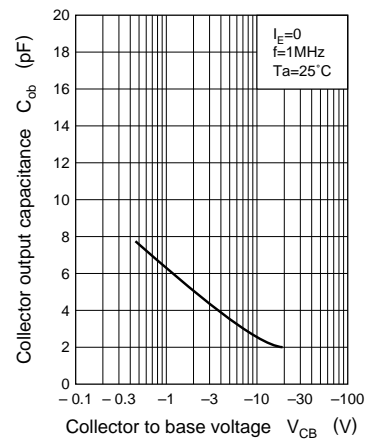
$h_{FE} - I_C$

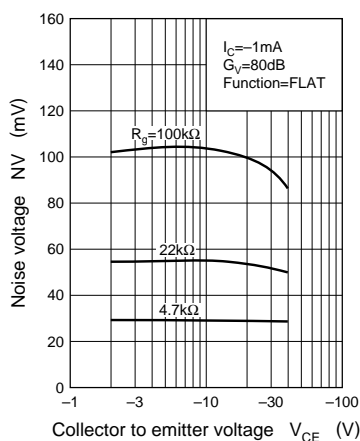
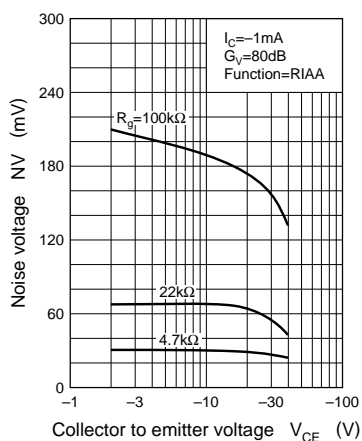
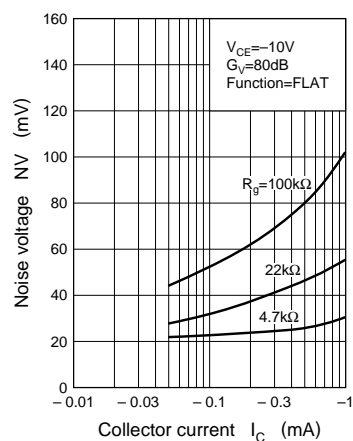
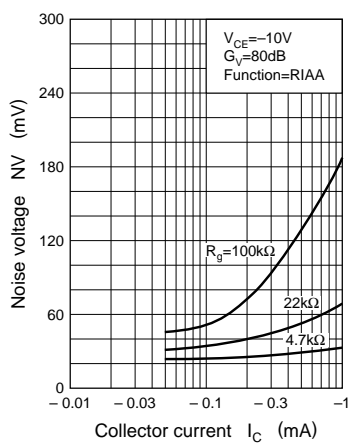
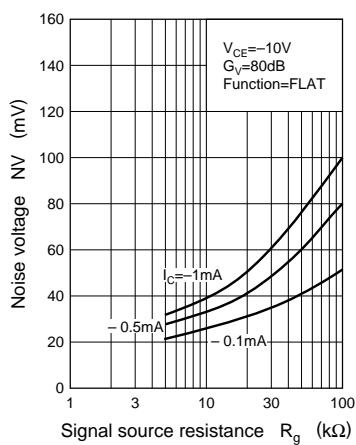


$f_T - I_E$



$C_{ob} - V_{CB}$



NV —  $V_{CE}$ NV —  $V_{CE}$ NV —  $I_C$ NV —  $I_C$ NV —  $R_g$ NV —  $R_g$ 