

# 2SC2405, 2SC2406

## Silicon NPN epitaxial planar type

For low-frequency and low-noise amplification  
Complementary to 2SA1034 and 2SA1035

### ■ 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	2SC2405	$V_{CBO}$	35	V
	2SC2406		55	
Collector-emitter voltage (Base open)	2SC2405	$V_{CEO}$	35	V
	2SC2406		55	
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V	
Collector current	$I_C$	50	mA	
Peak collector current	$I_{CP}$	100	mA	
Collector power dissipation	$P_C$	200	mW	
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

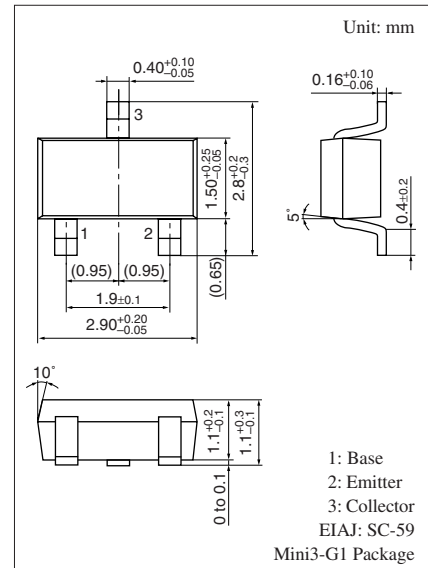
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	2SC2405	$I_C = 10 \mu\text{A}, I_E = 0$	35			V
	2SC2406		55			
Collector-emitter voltage (Base open)	2SC2405	$I_C = 2 \text{mA}, I_B = 0$	35			V
	2SC2406		55			
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 1 \text{V}, I_C = 100 \text{mA}$		0.7	1.0	V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 10 \text{V}, I_E = 0$			0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 10 \text{V}, I_B = 0$			1	$\mu\text{A}$
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = 5 \text{V}, I_C = 2 \text{mA}$	180		700	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{mA}, I_B = 10 \text{mA}$			0.6	V
Transition frequency	$f_T$	$V_{CB} = 5 \text{V}, I_E = -2 \text{mA}, f = 200 \text{MHz}$		200		MHz
Noise voltage	NV	$V_{CE} = 10 \text{V}, I_C = 1 \text{mA}, G_V = 80 \text{dB}$ $R_g = 100 \text{k}\Omega, \text{Function} = \text{FLAT}$		110		mV

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

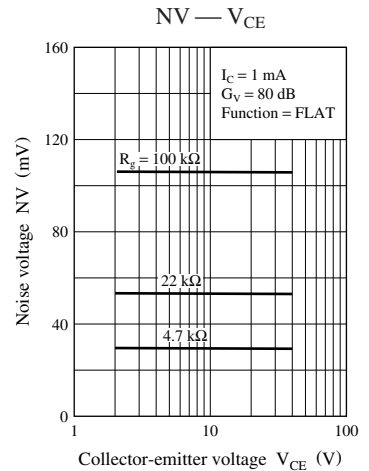
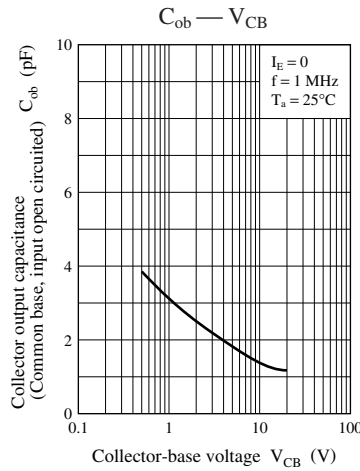
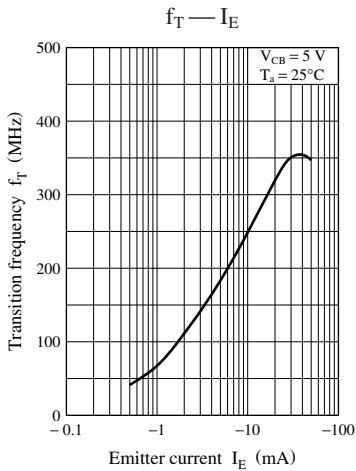
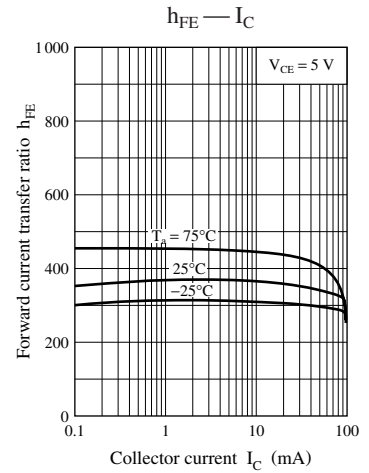
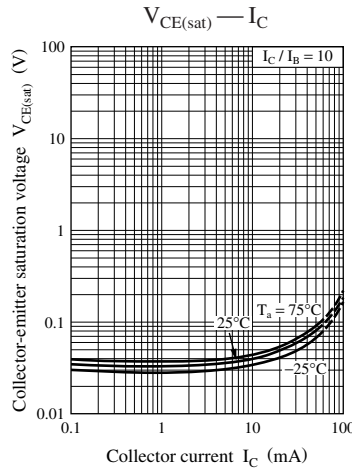
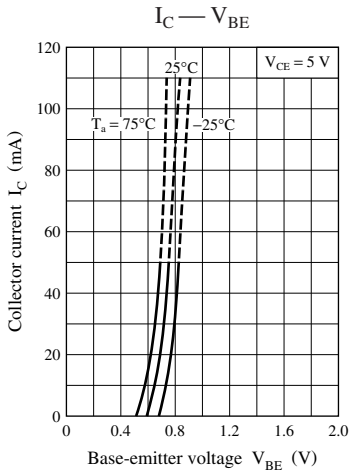
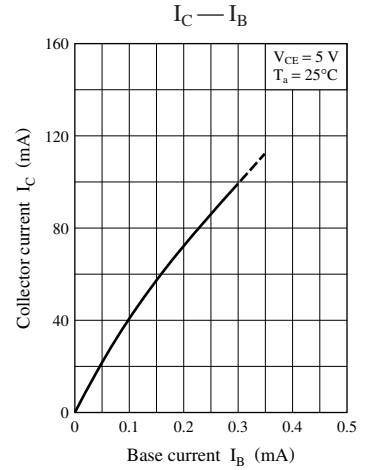
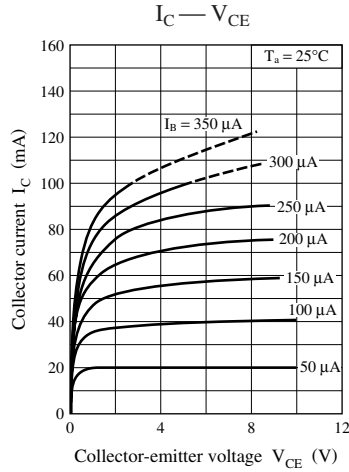
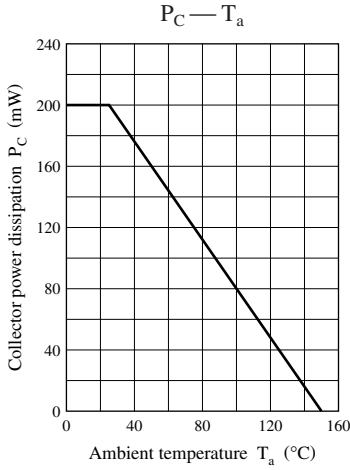
2. \*: Rank classification

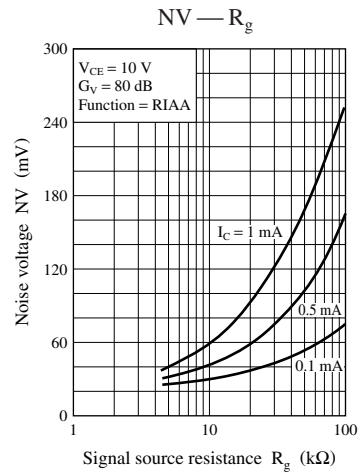
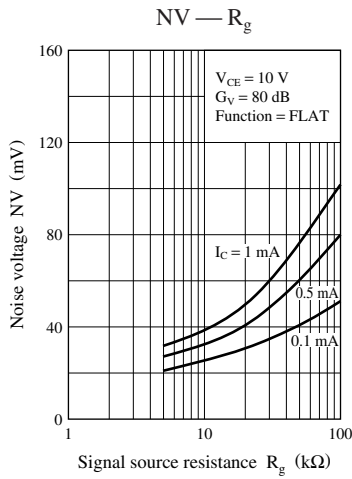
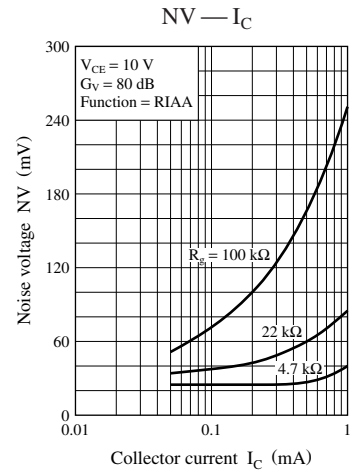
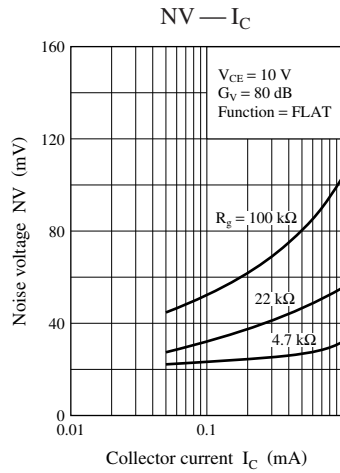
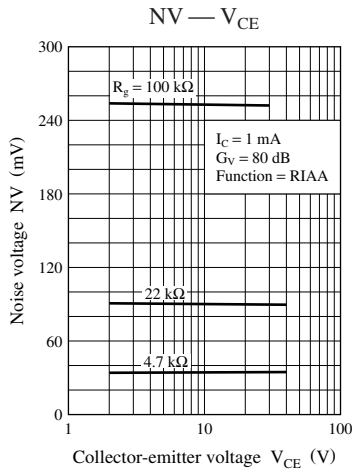
Rank	R	S	T	
$h_{FE}$	180 to 360	260 to 520	360 to 700	
Marking symbol	2SC2405	SR	SS	ST
	2SC2406	TR	TS	TT



### Marking Symbol:

- 2SC2405: S
- 2SC2406: T





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