

2SC2405, 2SC2406

Silicon NPN epitaxial planer 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 (Ta=25°C)

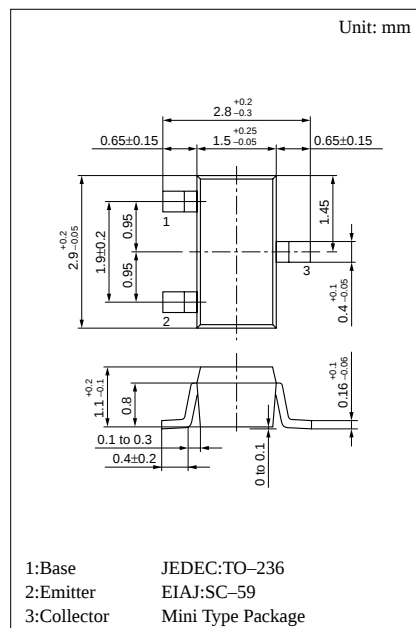
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	2SC2405 35	V
2SC2406		55	
Collector to emitter voltage	V _{CEO}	2SC2405 35	V
2SC2406		55	
Emitter to base voltage	V _{EBO}	5	V
Peak collector current	I _{CP}	100	mA
Collector current	I _C	50	mA
Collector power dissipation	P _C	200	mW
Junction 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 = 10μA, I _E = 0	2SC2405 35			V
			2SC2406 55			
Collector to emitter voltage	V _{CEO}	I _C = 2mA, I _B = 0	2SC2405 35			V
			2SC2406 55			
Emitter to base voltage	V _{EBO}	I _E = 10μA, I _C = 0	5			V
Forward current transfer ratio	h _{FE} *	V _{CB} = 5V, I _E = -2mA	180		700	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 100mA, I _B = 10mA			0.6	V
Base to emitter voltage	V _{BE}	V _{CE} = 1V, I _C = 100mA		0.7	1	V
Transition frequency	f _T	V _{CB} = 5V, I _E = -2mA, f = 200MHz		200		MHz
Noise voltage	NV	V _{CE} = 10V, I _C = 1mA, G _v = 80dB R _g = 100kΩ, Function = FLAT		110		mV

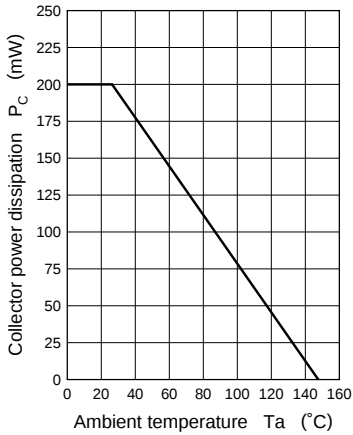
*h_{FE} Rank classification

Rank	R	S	T
h _{FE}	180 ~ 360	260 ~ 520	360 ~ 700
Marking	2SC2405	SR	SS
Symbol	2SC2406	TR	TS

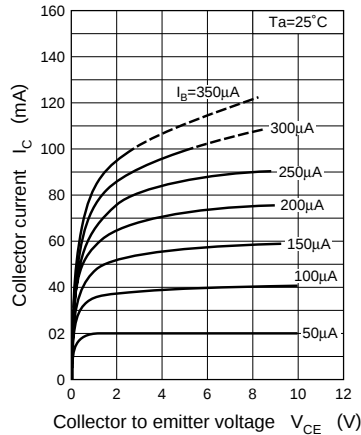


Marking symbol : S(2SC2405)
T(2SC2406)

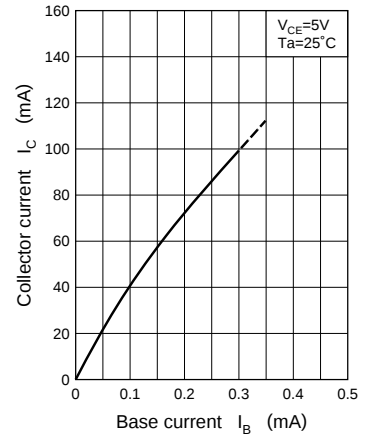
$P_C - T_a$



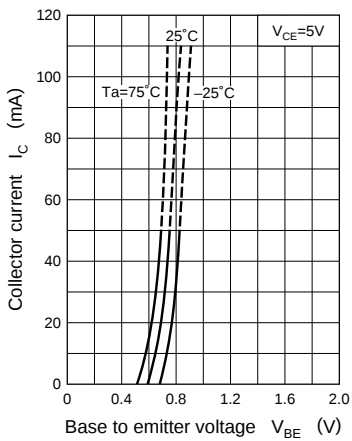
$I_C - V_{CE}$



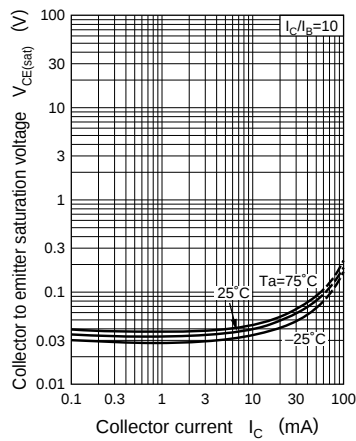
$I_C - I_B$



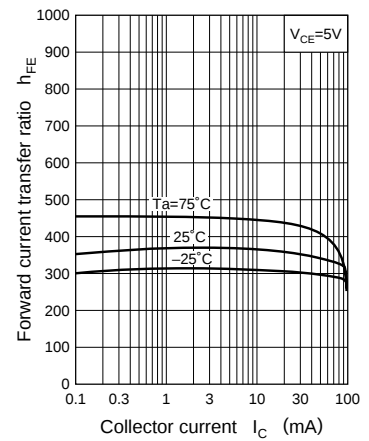
$I_C - V_{BE}$



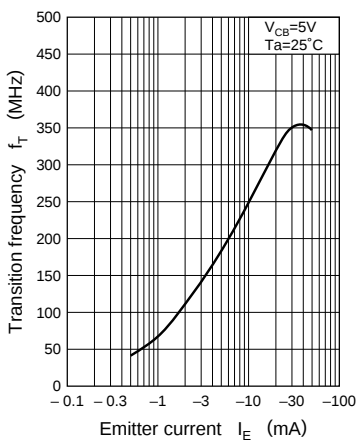
$V_{CE(sat)} - I_C$



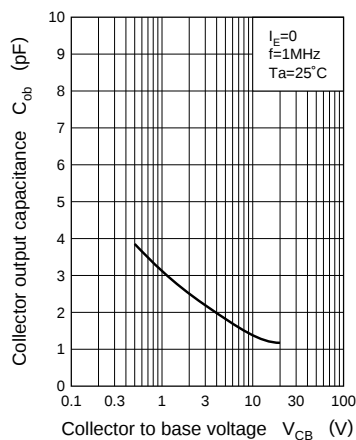
$h_{FE} - I_C$



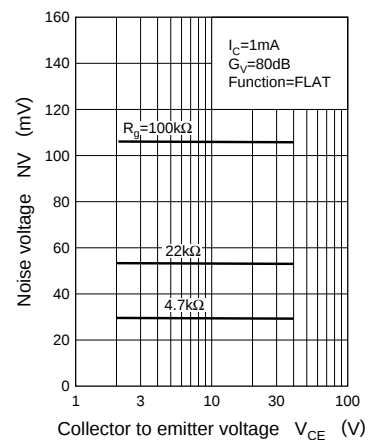
$f_T - I_E$

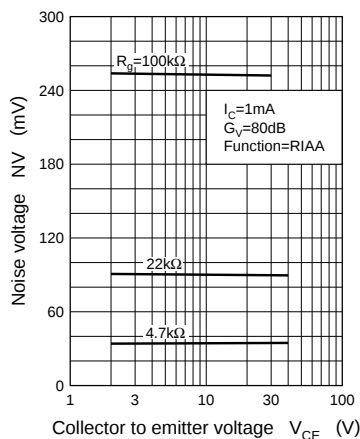
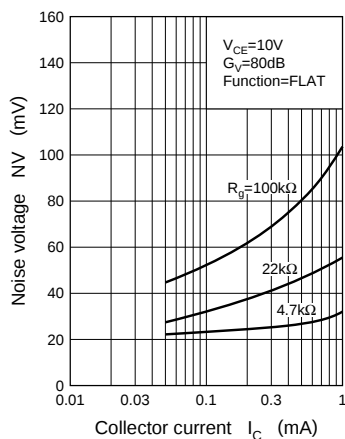
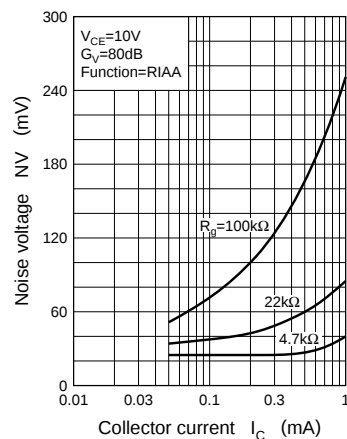
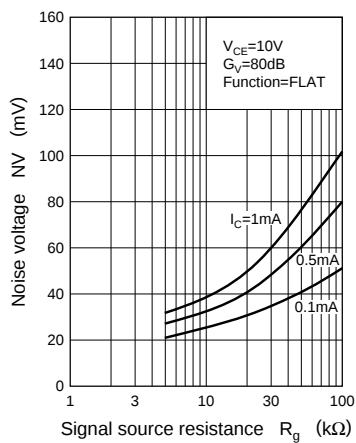


$C_{ob} - V_{CB}$



$NV - V_{CE}$



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