

# XN04404 (XN4404)

## Silicon PNP epitaxial planer transistor

For general amplification

### ■ Features

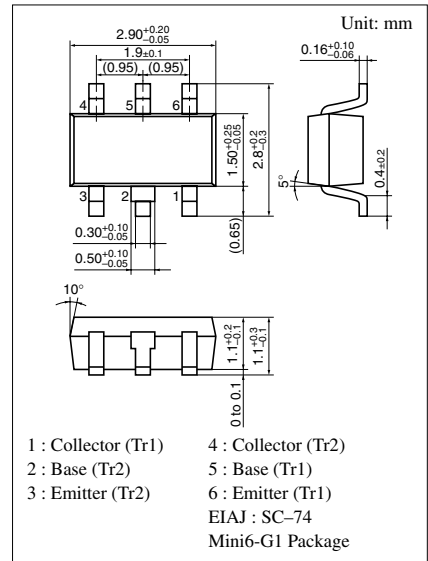
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

### ■ Basic Part Number of Element

- 2SB0970(2SB970) × 2 elements

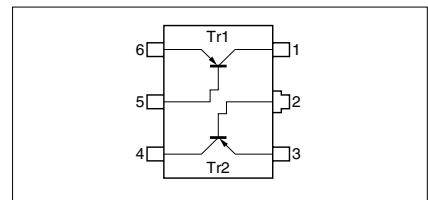
### ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit	
Rating of element	Collector to base voltage	$V_{CBO}$	-15	V
	Collector to emitter voltage	$V_{CEO}$	-10	V
	Emitter to base voltage	$V_{EBO}$	-7	V
	Collector current	$I_C$	-0.5	A
	Peak collector current	$I_{CP}$	-1	A
Overall	Total power dissipation	$P_T$	300	mW
	Junction temperature	$T_j$	150	°C
	Storage temperature	$T_{sig}$	-55 to +150	°C



Marking Symbol: CV

Internal Connection



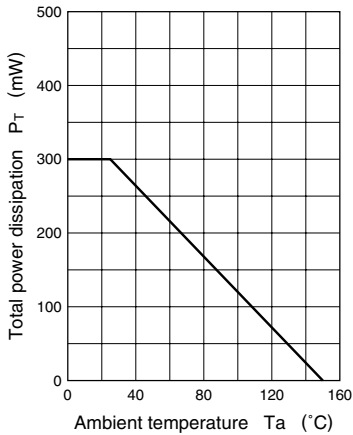
### ■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = -10\mu A, I_E = 0$	-15			V
Collector to emitter voltage	$V_{CEO}$	$I_C = -1mA, I_B = 0$	-10			V
Emitter to base voltage	$V_{EBO}$	$I_E = -10\mu A, I_C = 0$	-7			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = -10V, I_E = 0$			-0.1	$\mu A$
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = -2V, I_C = -500mA^*$	100		350	
	$h_{FE2}$	$V_{CE} = -2V, I_C = -1A^*$	60			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -400mA, I_B = -8mA^*$		-0.16	-0.3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -400mA, I_B = -8mA^*$		-0.8	-1.2	V
Transition frequency	$f_T$	$V_{CB} = -10V, I_E = 50mA, f = 200MHz$		130		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		22		pF

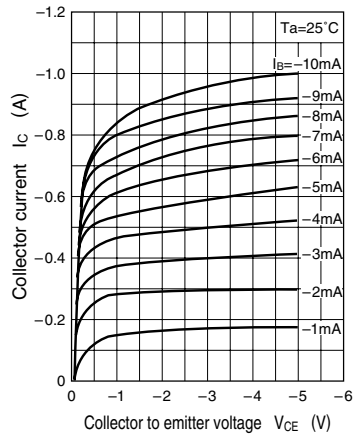
\*Pulse measurement

Note) The Part number in the Parenthesis shows conventional part number.

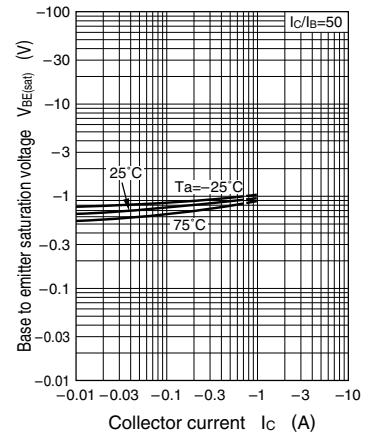
$P_T - T_a$



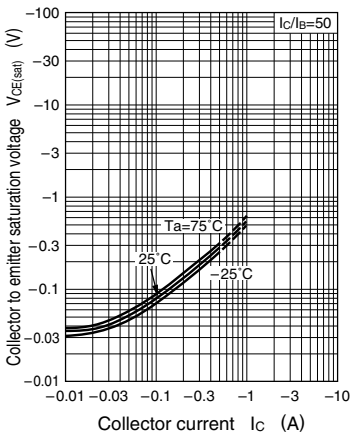
$I_C - V_{CE}$



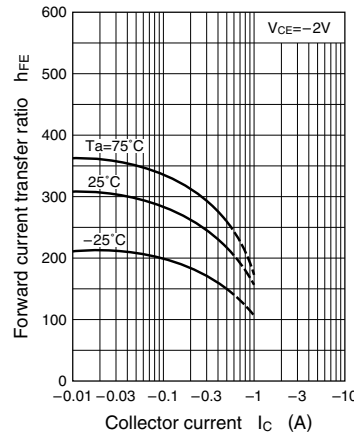
$V_{BE(sat)} - I_C$



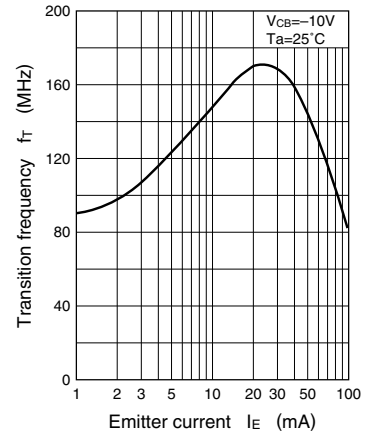
$V_{CE(sat)} - I_C$



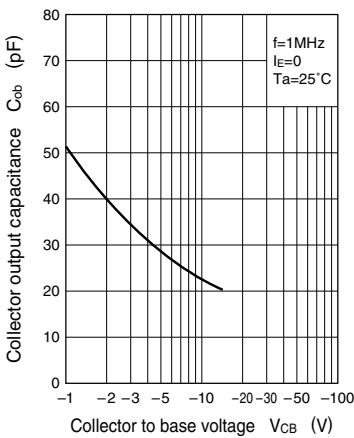
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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