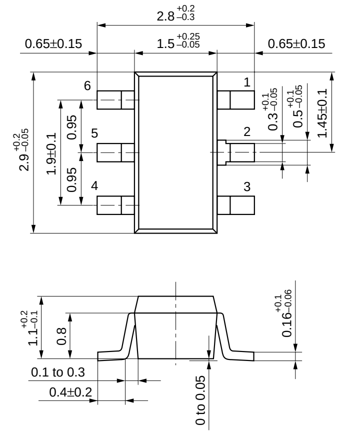
XN4503

Silicon NPN epitaxial planer transistor

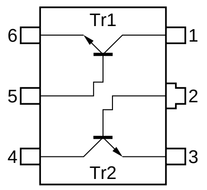
For amplification of low frequency output



1 : Collector (Tr1)	4 : Collector (Tr2)
2 : Base (Tr2)	5 : Base (Tr1)
3 : Emitter (Tr2)	6 : Emitter (Tr1)
	EIAJ : SC–74
	Mini Type Package (6–pin)

Marking Symbol: 5Y

Internal Connection



Features

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

Basic Part Number of Element

- 2SD813 × 2 elements

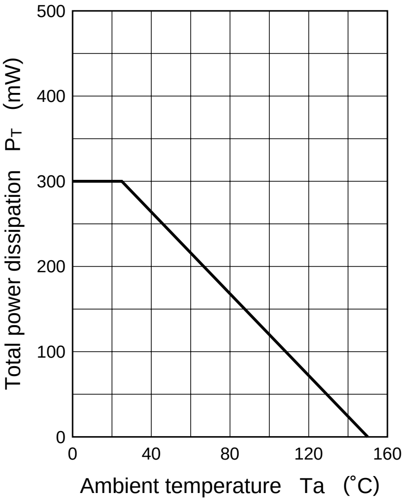
Absolute Maximum Ratings (Ta=25˚C)

Parameter		Symbol	Ratings	Unit
Rating of element	Collector to base voltage	V_{CBO}	25	V
	Collector to emitter voltage	V_{CEO}	20	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_{stg}	–55 to +150	˚C

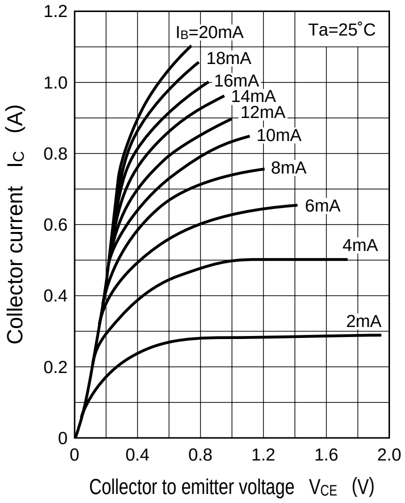
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = 10\mu A, I_E = 0$	25			V
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	20			V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	7			V
Collector cutoff current	I_{CBO}	$V_{CB} = 25V, I_E = 0$			0.1	µA
	I_{CEO}	$V_{CE} = 20V, I_B = 0$			1	µA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 2V, I_C = 500mA$*	65		350	
	h_{FE2}	$V_{CE} = 2V, I_C = 1A$*	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 20mA$*		0.2	0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$*			1.2	V
Transition frequency	f_T	$V_{CB} = 10V, I_E = –50mA, f = 200MHz$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		6		pF

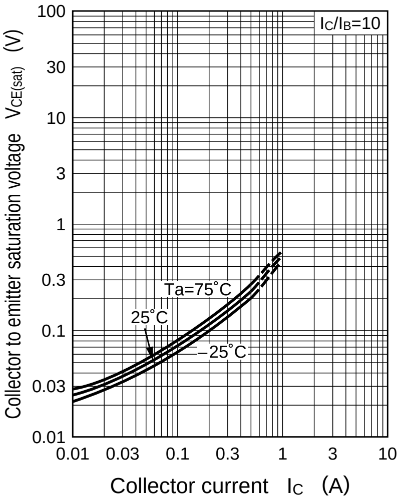
* Pulse measurement



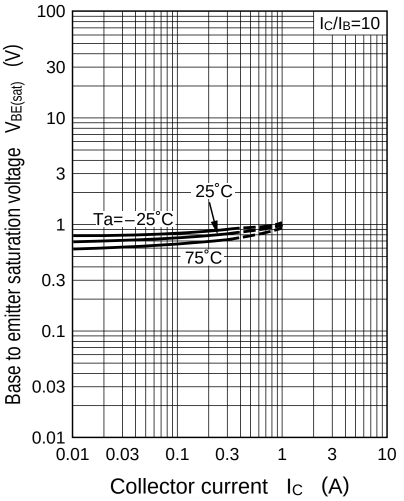
P_T — Ta



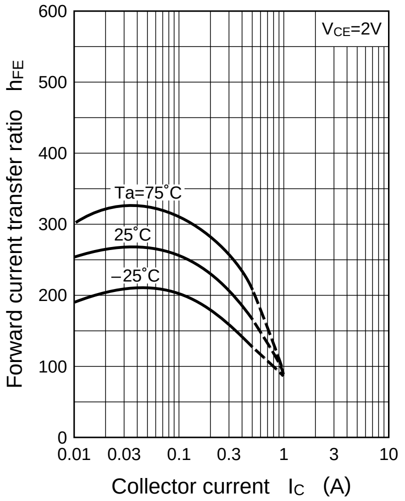
I_C — V_{CE}



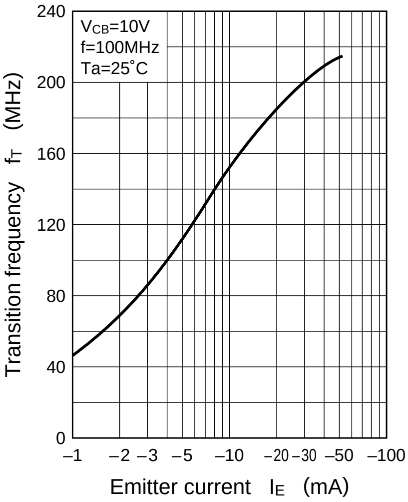
$V_{CE(sat)}$ — I_C



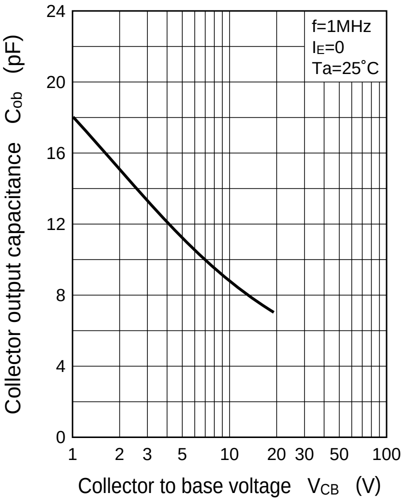
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}