XN05553 (XN5553)

Silicon NPN epitaxial planer transistor

For amplification of the low frequency

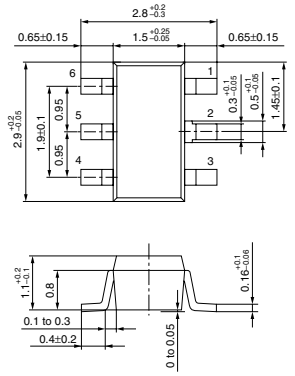
Features

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

Basic Part Number of Element

- 2SD1149 × 2 elements

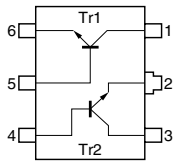
Unit: mm



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

Marking Symbol: 4U

Internal Connection



Absolute Maximum Ratings (Ta=25˚C)

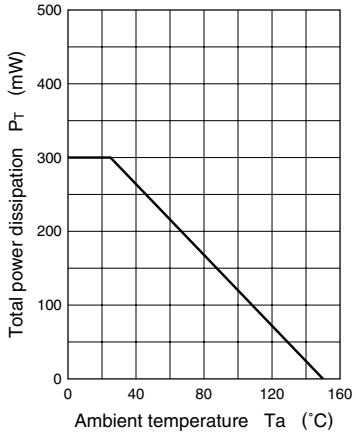
Parameter		Symbol	Ratings	Unit
Rating of element	Collector to base voltage	V_{CBO}	100	V
	Collector to emitter voltage	V_{CEO}	100	V
	Emitter to base voltage	V_{EBO}	15	V
	Collector current	I_C	20	mA
	Peak collector current	I_{CP}	50	mA
Overall	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	˚C
	Storage temperature	T_{stg}	–55 to +150	˚C

Electrical Characteristics (Ta=25˚C)

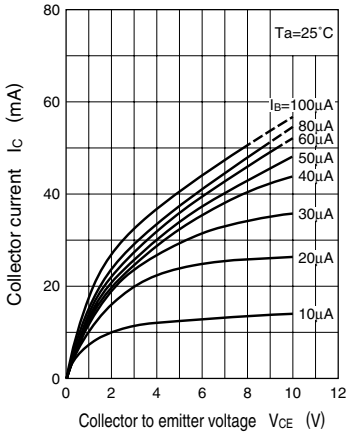
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	I_C = 10μA, I_E = 0	100			V
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	100			V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	15			V
Collector cutoff current	I_{CBO}	V_{CB} = 60V, I_E = 0			0.1	μA
	I_{CEO}	V_{CE} = 60V, I_B = 0			1.0	μA
Forward current transfer ratio	h_{FE}	V_{CE} = 10V, I_C = 2mA	400		2000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA		0.05	0.2	V
Noise voltage	NV	V_{CE} = 10V, I_C = 1mA, G_V = 80dB R_g = 100KΩ, Function = FLAT		80		mV
Transition frequency	f_T	V_{CB} = 10V, I_E = –2mA, f = 200MHz		150		MHz

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

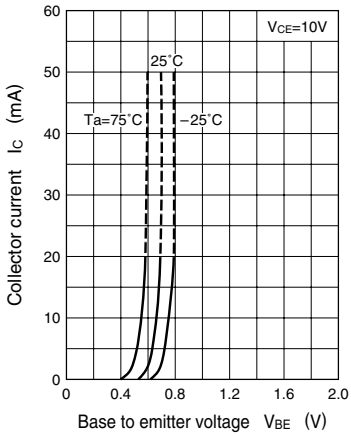
P_T — Ta



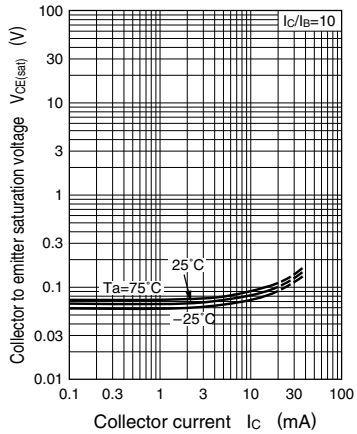
I_C — V_{CE}



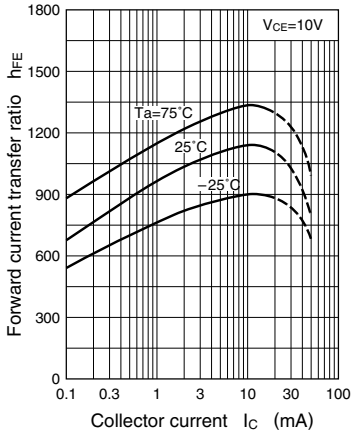
I_C — V_{BE}



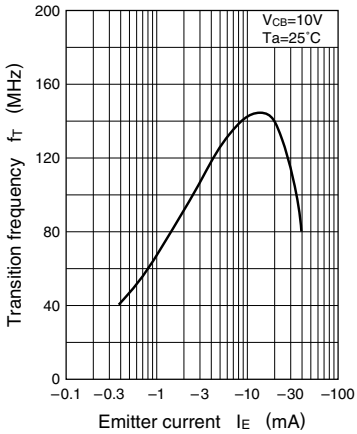
$V_{CE(sat)}$ — I_C



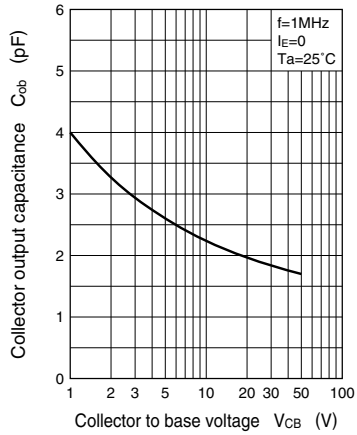
h_{FE} — I_C



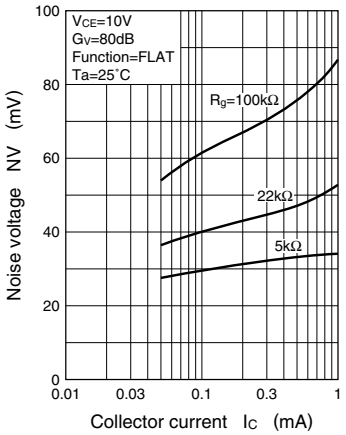
f_T — I_E



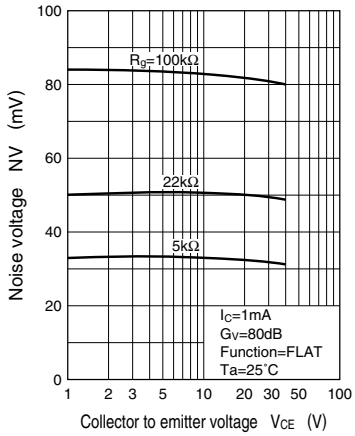
C_{ob} — V_{CB}



NV — I_C



NV — V_{CE}



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