

# XN05553 (XN5553)

## Silicon NPN epitaxial planar type

For low-frequency amplification

### ■ Features

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

### ■ Basic Part Number

- 2SD1149 × 2

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

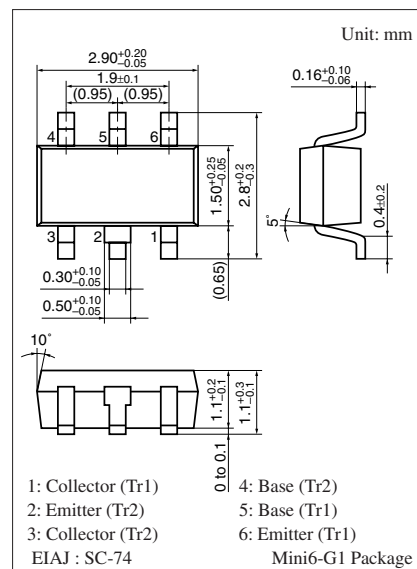
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	100	V
Collector-emitter voltage (Base open)	$V_{CEO}$	100	V
Emitter-base voltage (Collector open)	$V_{EBO}$	15	V
Collector current	$I_C$	20	mA
Peak collector current	$I_{CP}$	50	mA
Total power dissipation	$P_T$	300	mW
Junction 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)	$V_{CBO}$	$I_C = 10\ \mu\text{A}$ , $I_E = 0$	100			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 1\ \text{mA}$ , $I_B = 0$	100			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10\ \mu\text{A}$ , $I_C = 0$	15			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 60\ \text{V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 60\ \text{V}$ , $I_B = 0$			1.0	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 10\ \text{V}$ , $I_C = 2\ \text{mA}$	400		2000	—
$h_{FE}$ ratio *	$h_{FE(\text{Small}/\text{Large})}$	$V_{CE} = 4\ \text{V}$ , $I_C = 5\ \text{mA}$	0.50	0.99		—
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 10\ \text{mA}$ , $I_B = 1\ \text{mA}$		0.05	0.20	V
Noise voltage	NV	$V_{CE} = 10\ \text{V}$ , $I_C = 1\ \text{mA}$ , $G_v = 80\ \text{dB}$ $R_g = 100\ \text{k}\Omega$ , Function = FLAT		80		mV
Transition frequency	$f_T$	$V_{CB} = 10\ \text{V}$ , $I_E = -2\ \text{mA}$ , $f = 200\ \text{MHz}$		150		MHz

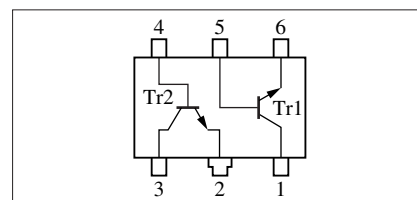
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Ratio between 2 elements

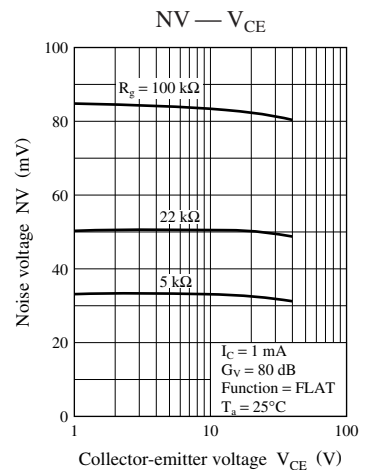
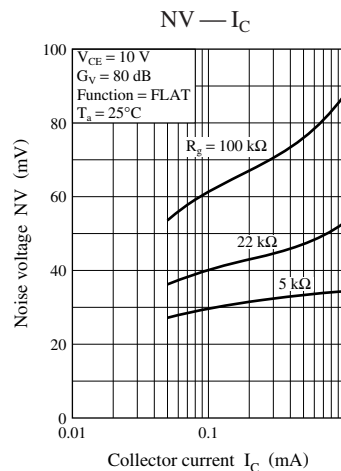
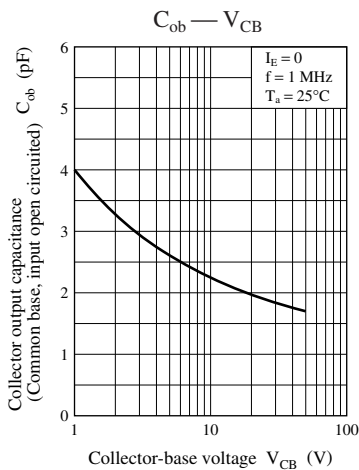
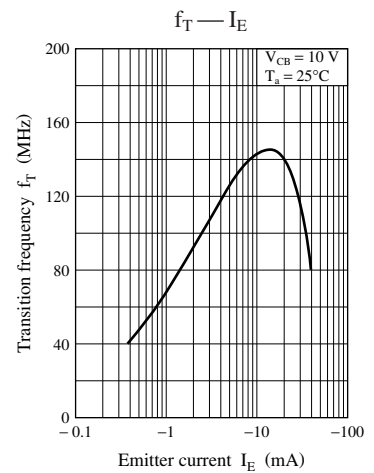
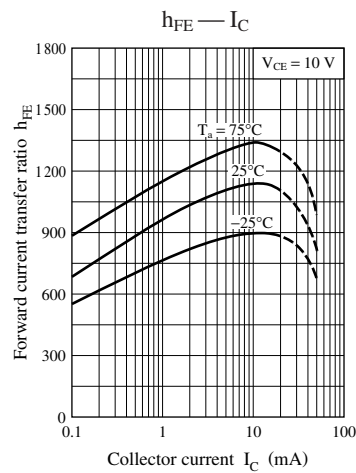
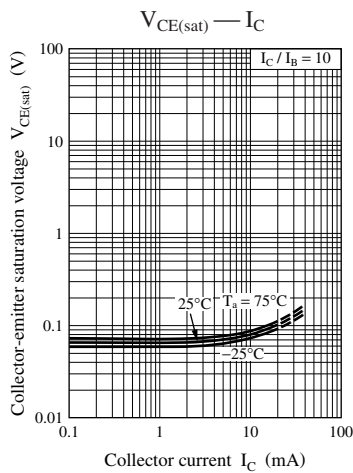
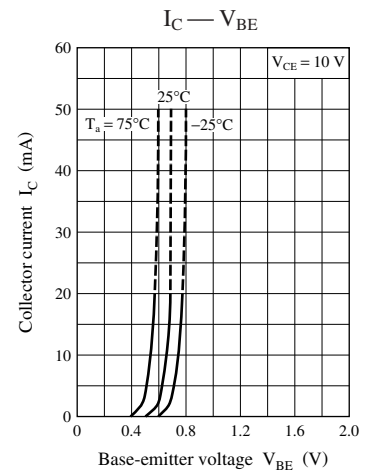
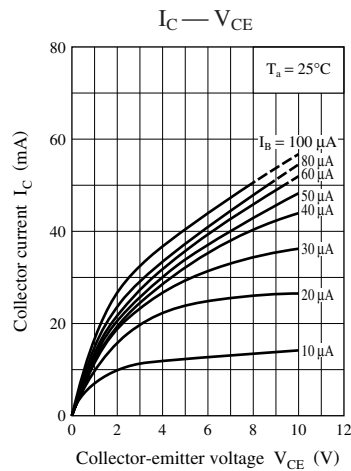
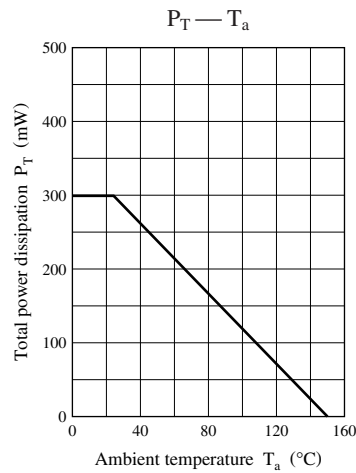


Marking Symbol: 4U

Internal Connection



Note) The part number in the parenthesis shows conventional part number.



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