

XP05553

Silicon NPN epitaxial planar type

For low-frequency amplification

■ Features

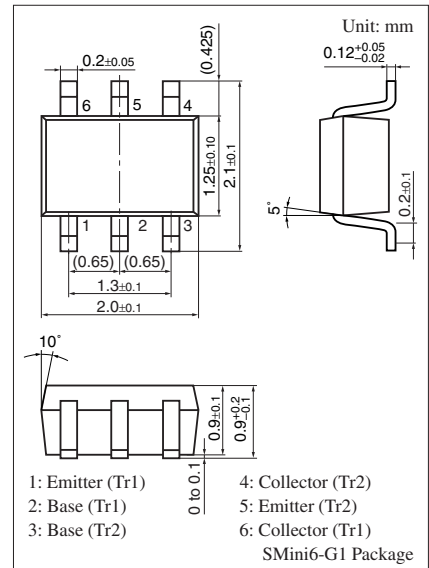
- Two elements incorporated into one package (Each transistor is separated)
- Reduction of the mounting area and assembly cost by one half
- High forward current transfer ratio h_{FE}

■ Basic Part Number

- 2SD1149 × 2

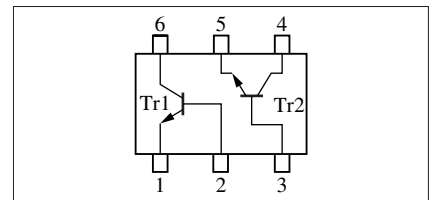
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: 4U

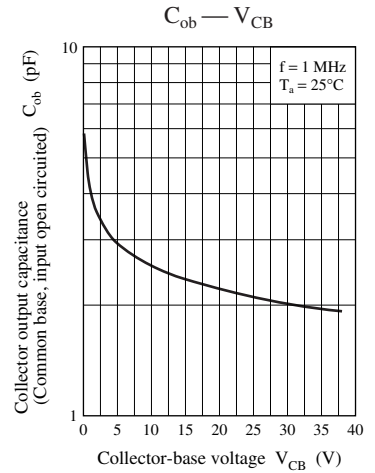
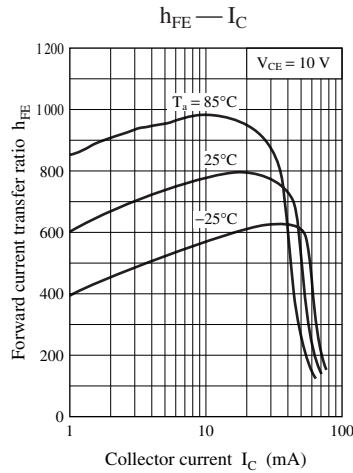
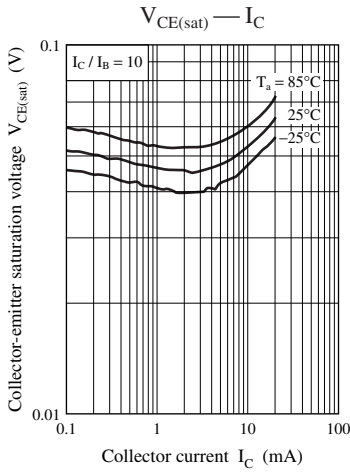
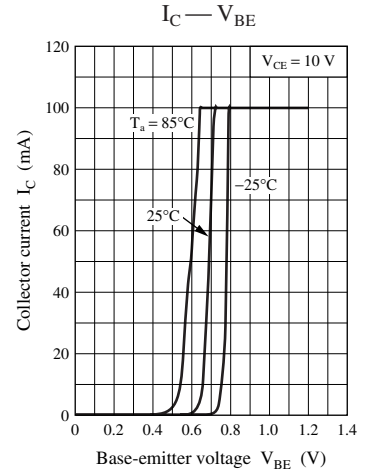
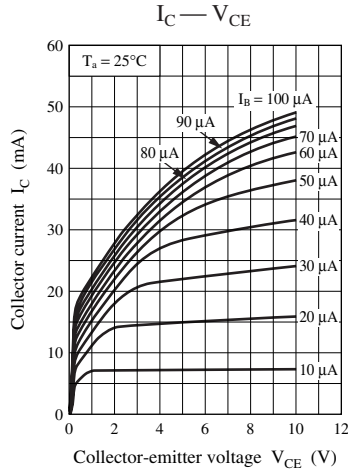
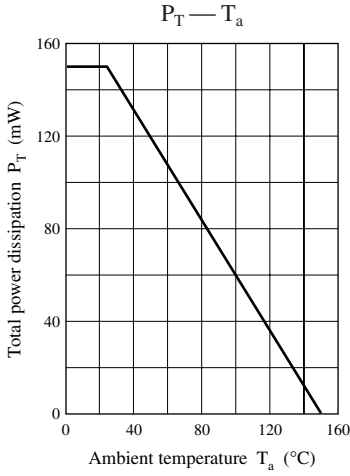
Internal Connection



■ 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	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 60 \text{ V}$, $I_B = 0$			1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10 \text{ V}$, $I_C = 2 \text{ mA}$	400		2000	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}$, $I_B = 1 \text{ mA}$		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) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



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