XN05553G

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

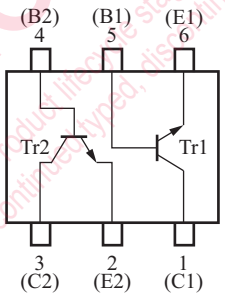
■ Package

- Code
  Mini6-G3
- Pin Name

1: Collector (Tr1) 4: Base (Tr2)
2: Emitter (Tr2) 5: Base (Tr1)
3: Collector (Tr2) 6: Emitter (Tr1)

■ Marking Symbol: 4U

■ Internal Connection



■ Absolute Maximum Ratings $T_a = 25°C$

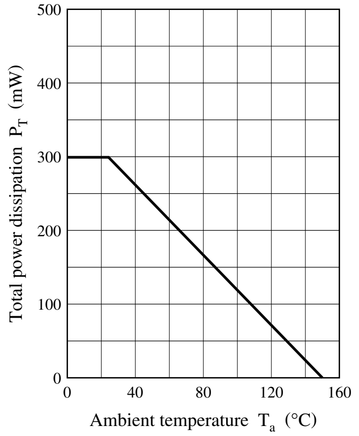
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	100	V
Collector-emitter voltage (Base open)	V_{CEO}	100	V
Emitter-base voltage (Collector open)	V_{EBO}	15	V
Collector current	I_C	20	mA
Peak collector current	I_{CP}	50	mA
Total power dissipation	P_T	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

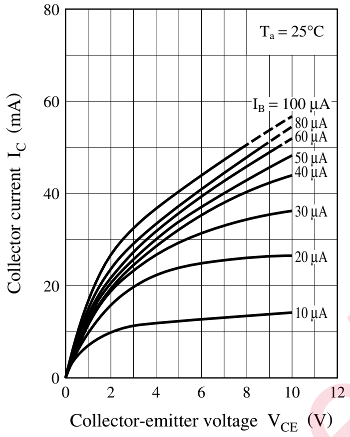
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	100			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	100			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	15			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 60 V, I_E = 0			0.1	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 60 V, I_B = 0			1.0	µA
Forward current transfer ratio	h_{FE}	V_{CE} = 10 V, I_C = 2 mA	400		2000	—
h_{FE} ratio *	$h_{FE(Small/Large)}$	V_{CE} = 4 V, I_C = 5 mA	0.50	0.99		—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 mA, I_B = 1 mA		0.05	0.20	V
Noise voltage	NV	V_{CE} = 10 V, I_C = 1 mA, G_V = 80 dB R_g = 100 kΩ, Function = FLAT		80		mV
Transition frequency	f_T	V_{CB} = 10 V, I_E = −2 mA, f = 200 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

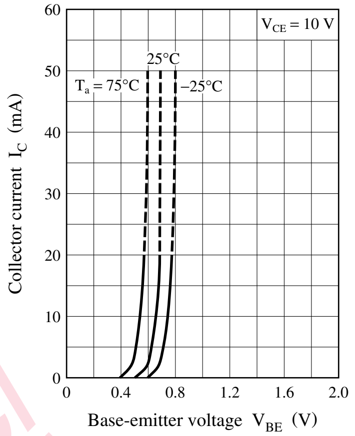
P_T — T_a



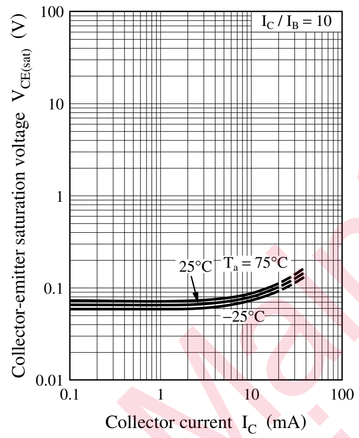
I_C — V_{CE}



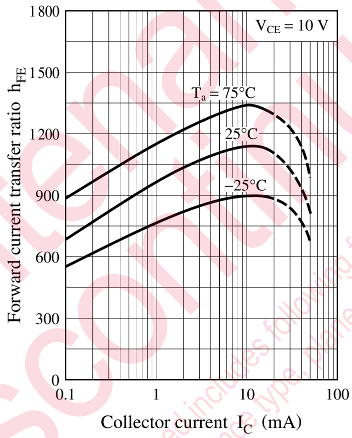
I_C — V_{BE}



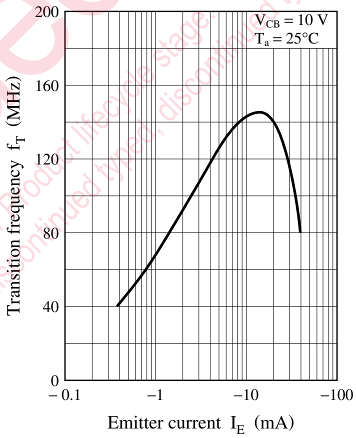
$V_{CE(sat)}$ — I_C



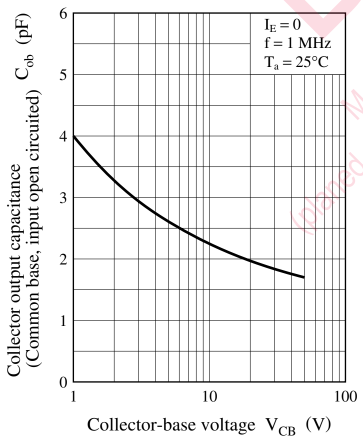
h_{FE} — I_C



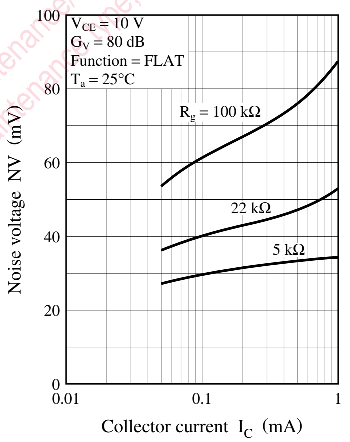
f_T — I_E



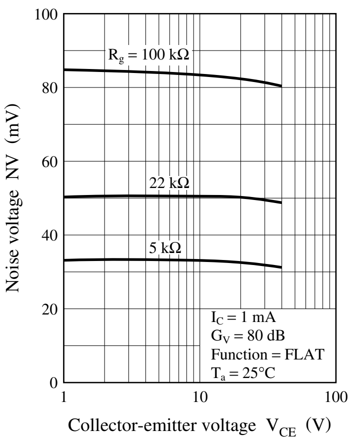
C_{ob} — V_{CB}



NV — I_C

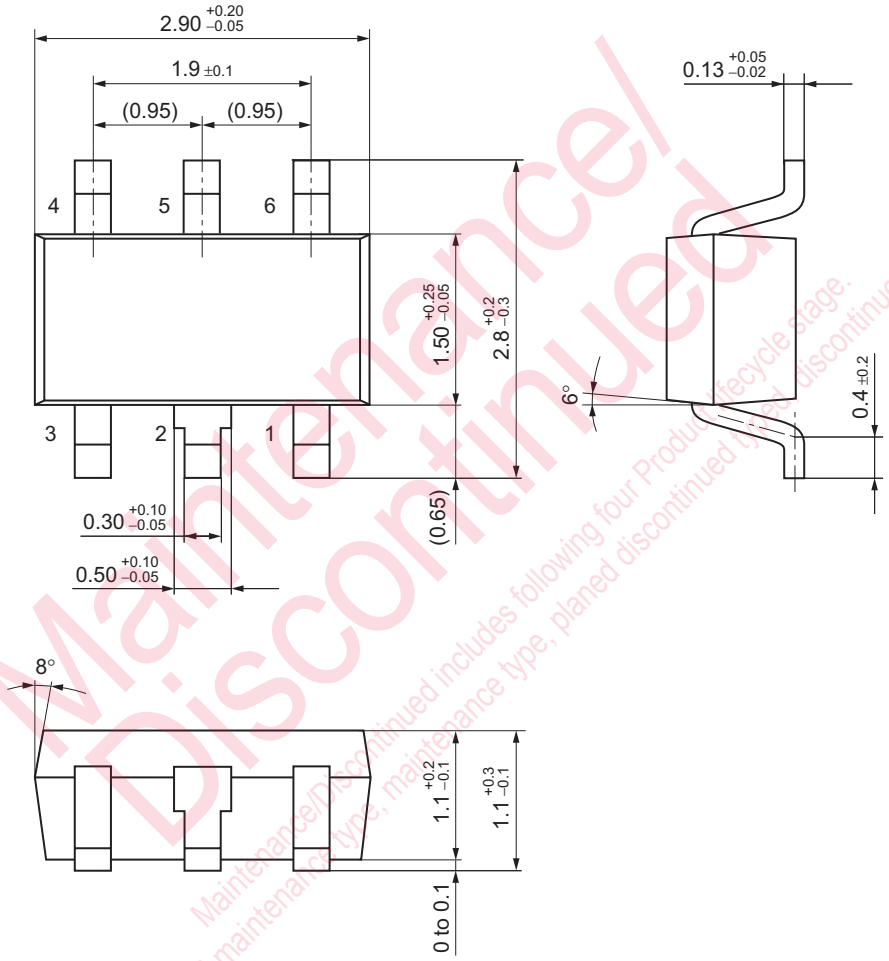


NV — V_{CE}



Mini6-G3

Unit: mm



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