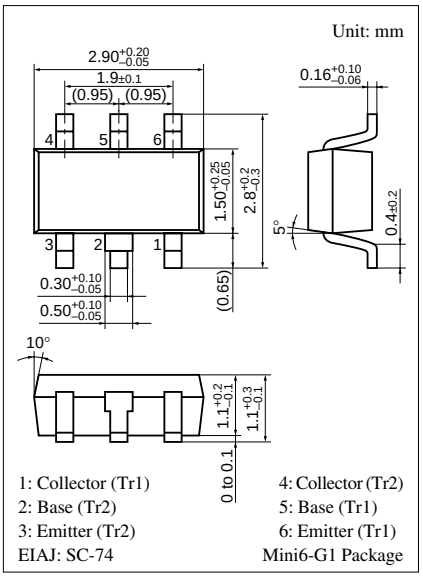
XN04110 (XN4110)

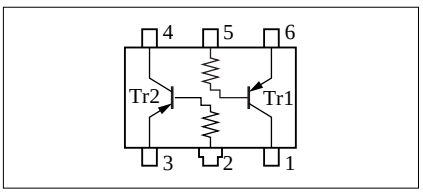
Silicon PNP epitaxial planar transistor

For digital circuits/switching



Marking Symbol: BI

Internal Connection



■ Features

- Two elements incorporated into one package (Transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number of Element

- UNR1110 (UN1110) × 2 elements

■ Absolute Maximum Ratings $T_a = 25°C$

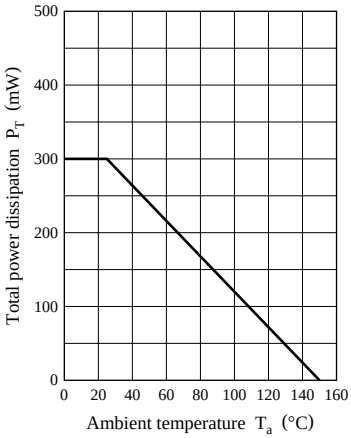
Parameter		Symbol	Rating	Unit
Rating of element	Collector to base voltage	V_{CBO}	−50	V
	Collector to emitter voltage	V_{CEO}	−50	V
	Collector current	I_C	−100	mA
Total	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	°C
	Storage temperature	T_{stg}	−55 to +150	°C

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

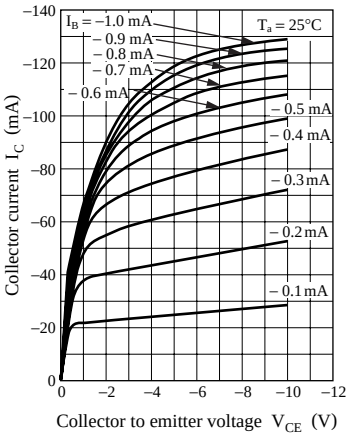
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V_{CBO}	$I_C = -10$ µA, $I_E = 0$	−50			V
Collector to emittter voltage	V_{CEO}	$I_C = -2$ mA, $I_B = 0$	−50			V
Collector cutoff current	I_{CBO}	$V_{CB} = -50$ V, $I_E = 0$			− 0.1	µA
	I_{CEO}	$V_{CE} = -50$ V, $I_B = 0$			− 0.5	
Emitter cutoff current	I_{EBO}	$V_{EB} = -6$ V, $I_C = 0$			− 0.01	mA
DC current gain	h_{FE}	$V_{CE} = -10$ V, $I_C = -5$ mA	160		460	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10$ mA, $I_B = -0.3$ mA			− 0.25	V
High level output voltage	V_{OH}	$V_{CC} = -5$ V, $V_B = -0.5$ V, $R_L = 1$ kΩ	−4.9			V
Low level output voltage	V_{OL}	$V_{CC} = -5$ V, $V_B = -2.5$ V, $R_L = 1$ kΩ			− 0.2	V
Input resistance	R_1		−30%	47	+30%	kΩ
Gain bandwidth product	f_T	$V_{CB} = -10$ V, $I_E = 1$ mA, f = 200 MHz		80		MHz

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

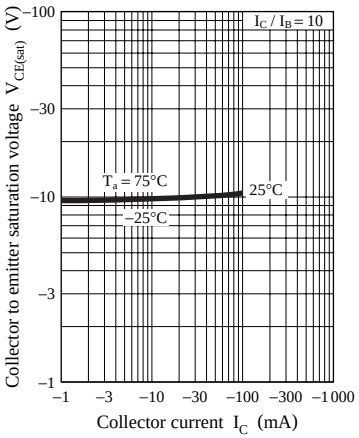
P_T — T_a



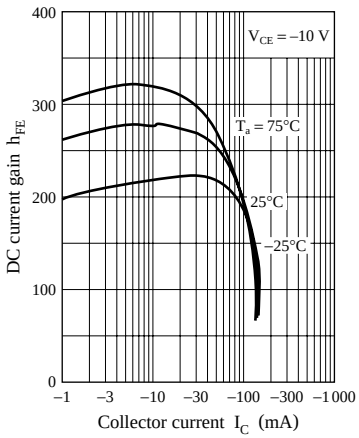
I_C — V_{CE}



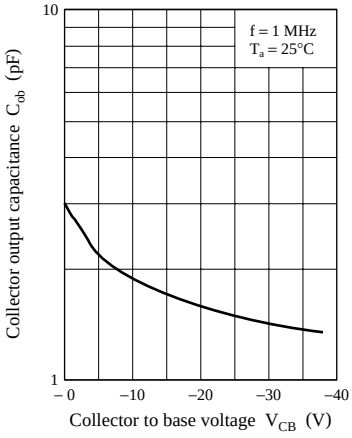
$V_{CE(sat)}$ — I_C



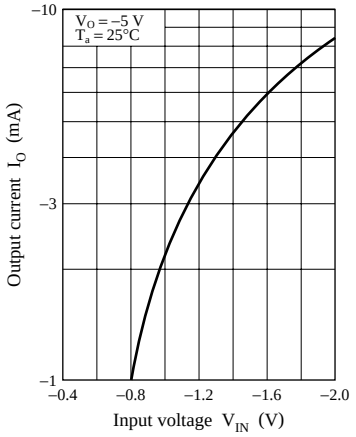
h_{FE} — I_C



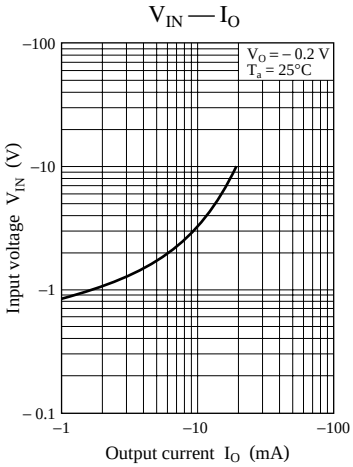
C_{ob} — V_{CB}



I_O — V_{IN}



V_{IN} — I_O



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