XN6435

Silicon PNP epitaxial planer transistor

For high-frequency amplification

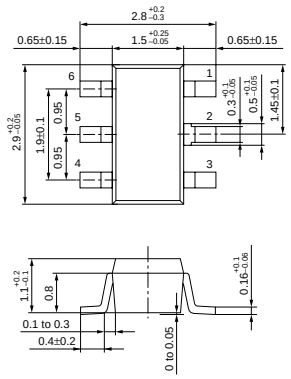
Features

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

Basic Part Number of Element

- 2SA1022 × 2 elements

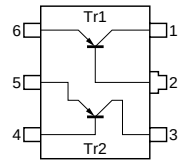
Unit: mm



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

Marking Symbol: 7W

Internal Connection



Absolute Maximum Ratings (Ta=25˚C)

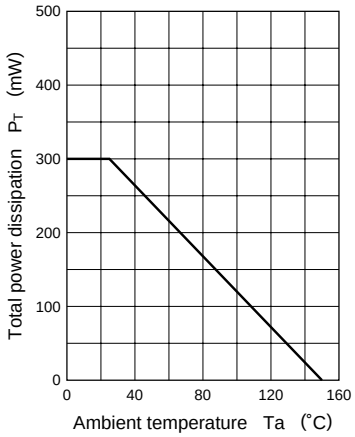
Parameter		Symbol	Ratings	Unit
Rating of element	Collector to base voltage	V_{CBO}	–30	V
	Collector to emitter voltage	V_{CEO}	–20	V
	Emitter to base voltage	V_{EBO}	–5	V
	Collector current	I_C	–30	mA
Overall	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	˚C
	Storage temperature	T_{stg}	–55 to +150	˚C

Electrical Characteristics (Ta=25˚C)

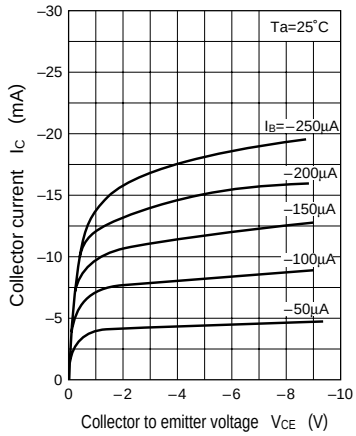
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = –10V, I_E = 0			–0.1	µA
	I_{CEO}	V_{CE} = –20V, I_B = 0			–100	µA
Emitter cutoff current	I_{EBO}	V_{EB} = –5V, IC = 0			–10	µA
Forward current transfer ratio	h_{FE}	V_{CE} = –10V, I_C = –1mA	50		220	
Forward current transfer h_{FE} ratio	h_{FE} (small/large)*1	V_{CE} = –10V, I_C = –1mA	0.5	0.99		
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –10mA, I_B = –1mA		– 0.1		V
Base to emitter voltage	V_{BE}	V_{CE} = –10V, I_C = –1mA		– 0.7		V
Transition frequency	f_T	V_{CB} = –10V, I_E = 1mA, f = 200MHz	150			MHz
Noise figure	NF	V_{CB} = –10V, I_E = 1mA, f = 5MHz		2.8		dB
Reverse transfer impedance	Z_{rb}	V_{CB} = –10V, I_E = 1mA, f = 2MHz		22		Ω
Common emitter reverse transfer capacitance	C_{re}	V_{CB} = –10V, I_E = 1mA, f = 10.7MHz		1.2		pF

*1 Ratio between 2 elements

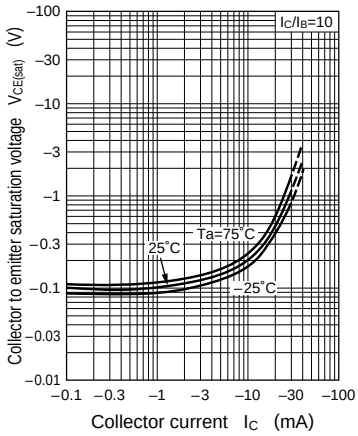
P_T — Ta



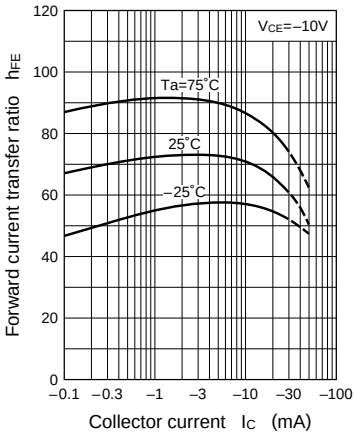
I_C — V_{CE}



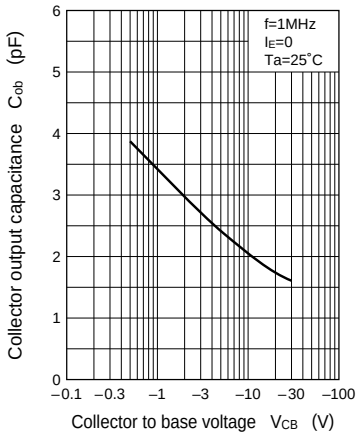
$V_{CE(sat)}$ — I_C



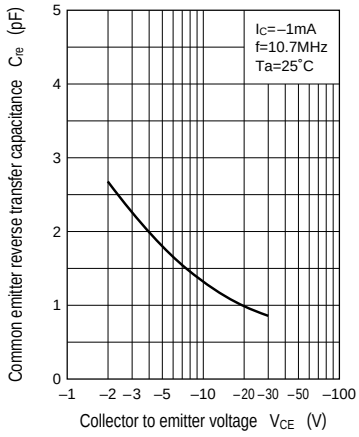
h_{FE} — I_C



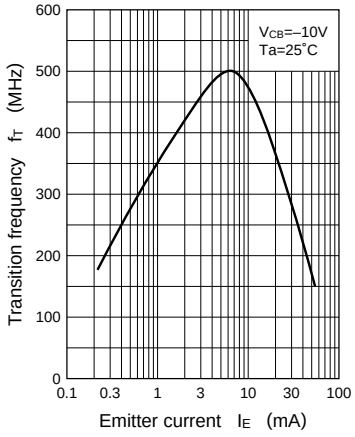
C_{ob} — V_{CB}



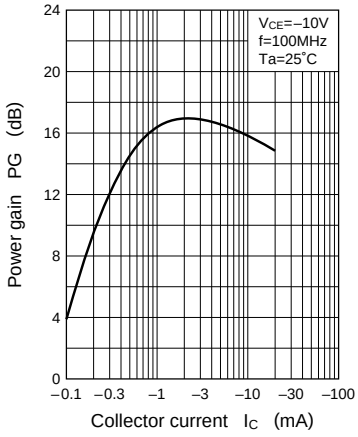
C_{re} — V_{CE}



f_T — I_E



PG — I_C



NF — I_E