

# XN6435

## Silicon PNP epitaxial planer transistor

For high-frequency amplification

### ■ Features

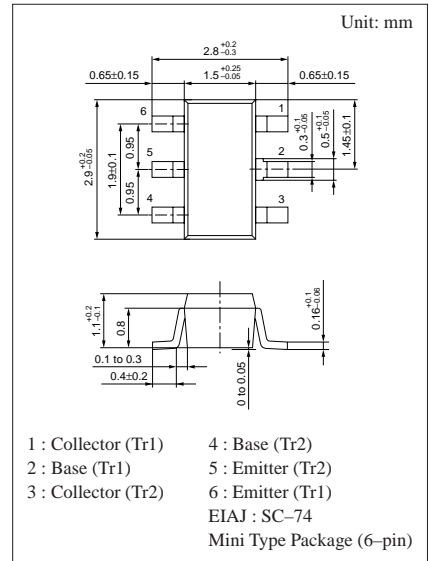
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

### ■ Basic Part Number of Element

- 2SA1022 × 2 elements

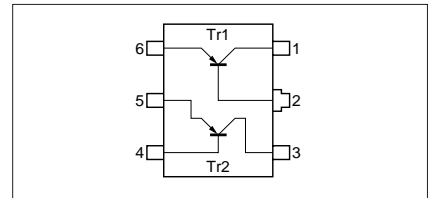
### ■ Absolute Maximum Ratings (Ta=25°C)

	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



Marking Symbol: 7W

Internal Connection

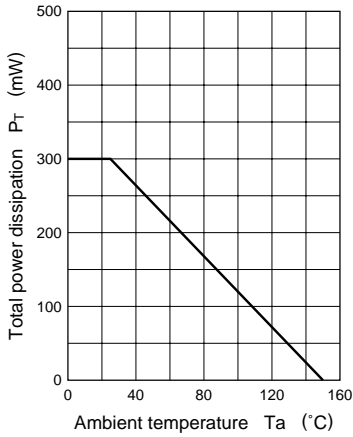


### ■ Electrical Characteristics (Ta=25°C)

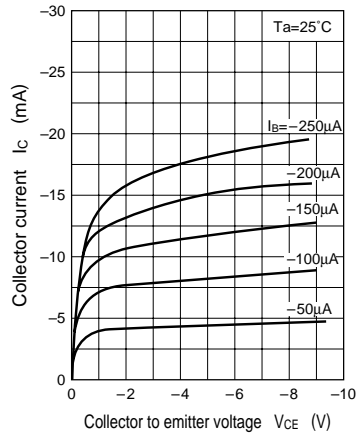
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -10V, I_E = 0$			-0.1	$\mu A$
	$I_{CEO}$	$V_{CE} = -20V, I_B = 0$			-100	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-10	$\mu A$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -10V, I_C = -1mA$	50		220	
Forward current transfer $h_{FE}$ ratio	$h_{FE}(\text{small/large})^{*1}$	$V_{CE} = -10V, I_C = -1mA$	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		$\Omega$
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CB} = -10V, I_E = 1mA, f = 10.7MHz$		1.2		pF

\*1 Ratio between 2 elements

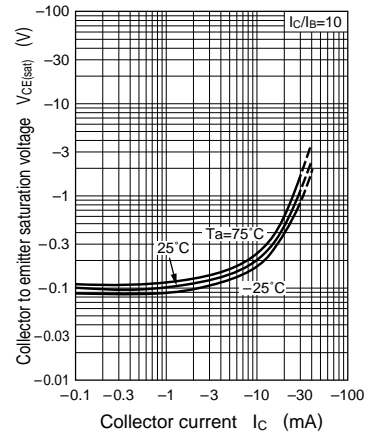
$P_T - T_a$



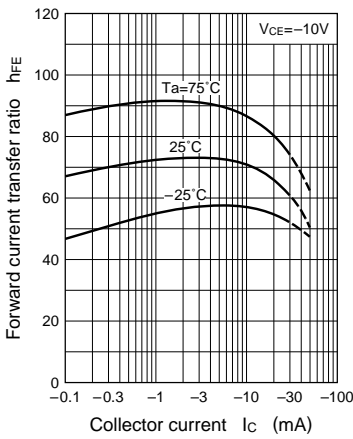
$I_C - V_{CE}$



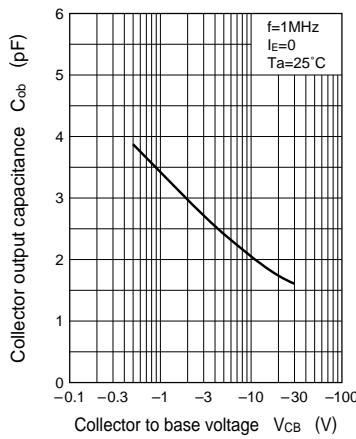
$V_{CE(sat)} - I_C$



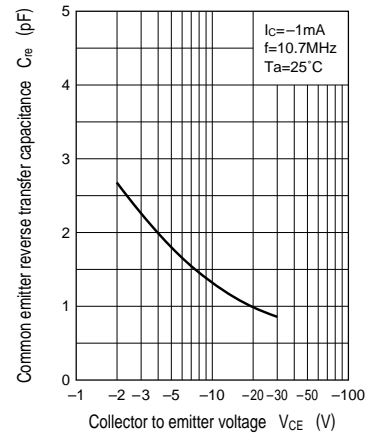
$h_{FE} - I_C$



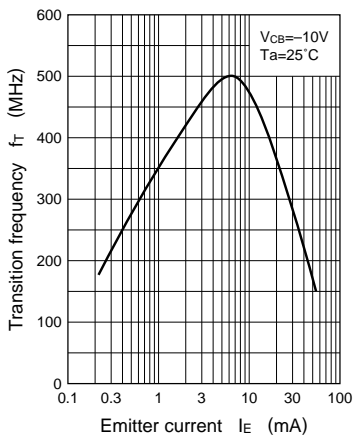
$C_{ob} - V_{CB}$



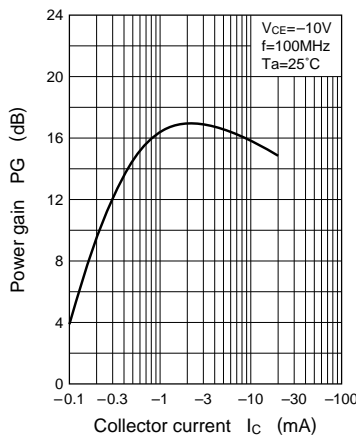
$C_{re} - V_{CE}$



$f_T - I_E$



$PG - I_C$



$NF - I_E$

