

XN6542

Silicon NPN epitaxial planer transistor

For high frequency amplification, oscillation, and mixing (Tr1),
 For medium-frequency amplification (Tr2)

■ Features

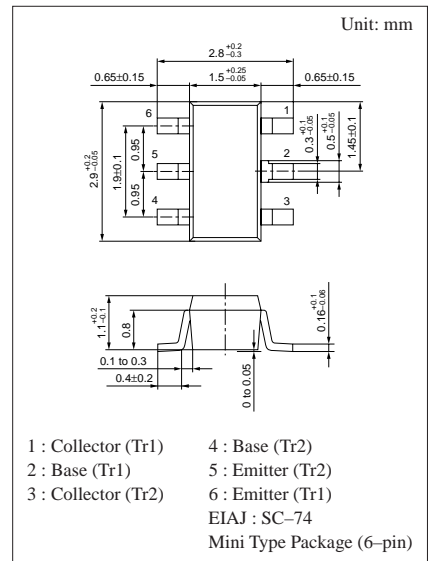
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

■ Basic Part Number of Element

- 2SC2480+2SC4444

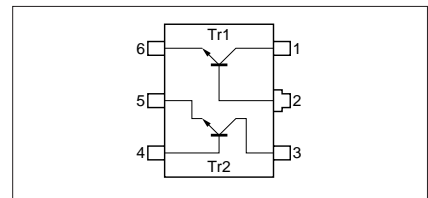
■ Absolute Maximum Ratings (Ta=25°C)

	Parameter	Symbol	Rated	Unit
Tr1	Collector to base voltage	V_{CBO}	30	V
	Collector to emitter voltage	V_{CEO}	20	V
	Emitter to base voltage	V_{EBO}	3	V
	Collector current	I_C	50	mA
Tr2	Collector to base voltage	V_{CBO}	45	V
	Collector to emitter voltage	V_{CEO}	35	V
	Emitter to base voltage	V_{EBO}	4	V
	Collector current	I_C	50	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: 5Z

Internal Connection



■ Electrical Characteristics (Ta=25°C)

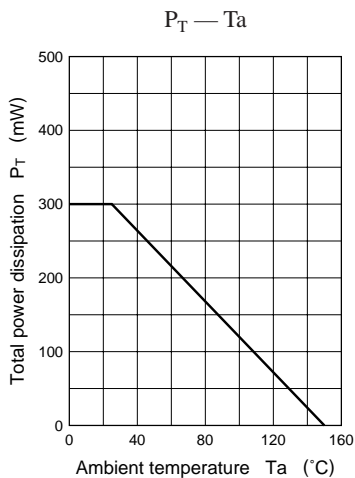
● Tr1

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V _{CB0}	I _C = 100μA, I _E = 0	30			V
Emitter to base voltage	V _{EBO}	I _E = 10μA, I _C = 0	3			V
Forward current transfer ratio	h _{FE}	V _{CB} = 10V, I _E = -2mA	25		250	
Base to emitter voltage	V _{BE}	V _{CB} = 10V, I _E = -2mA		720		mV
Common emitter reverse transfer capacitance	C _{re}	V _{CB} = 10V, I _E = -1mA, f = 10.7MHz		1.0	1.5	pF
Transition frequency	f _T	V _{CB} = 10V, I _E = -15mA, f = 200MHz	1000	1300	1600	MHz
Power gain	PG	V _{CB} = 10V, I _E = -1mA, f = 100MHz		20		dB
Reverse transfer capacitance	C _{rb}	V _{CE} = 6V, I _C = 0, f = 1MHz		0.8		pF

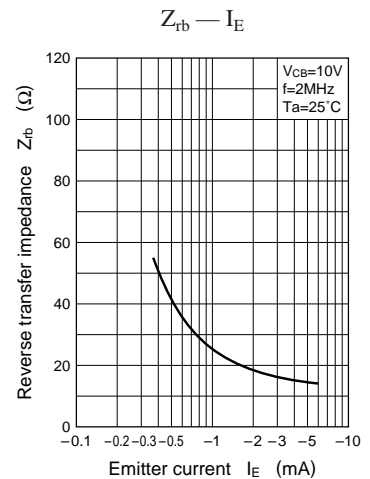
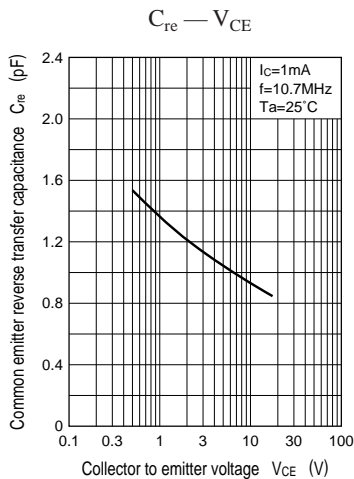
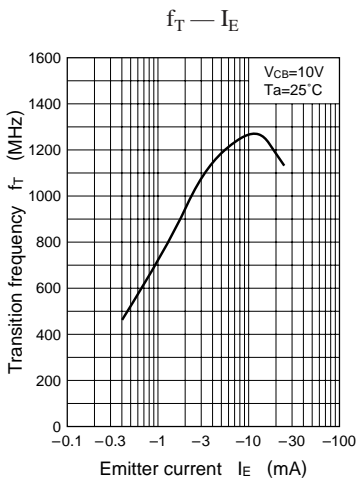
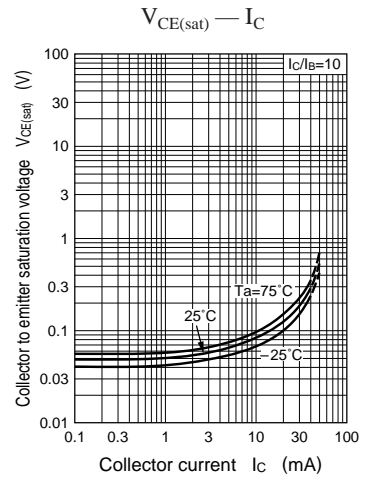
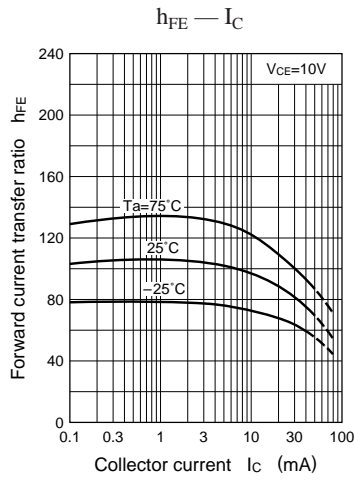
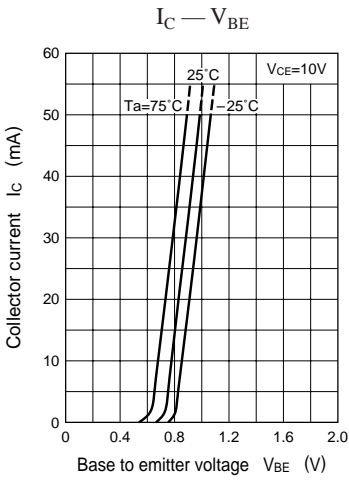
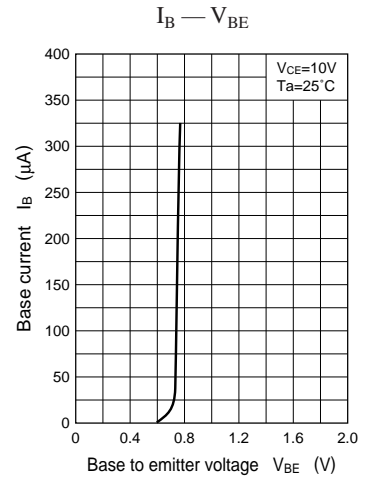
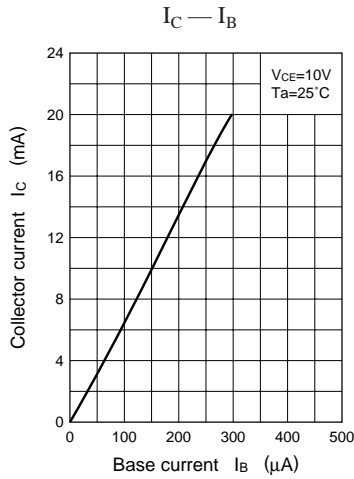
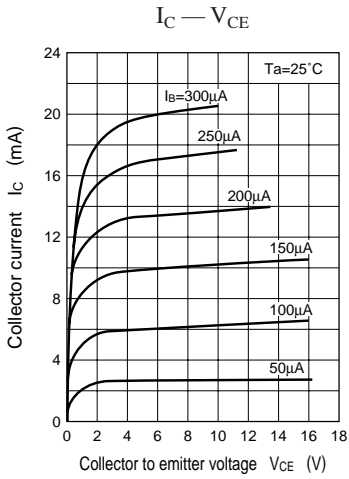
● Tr2

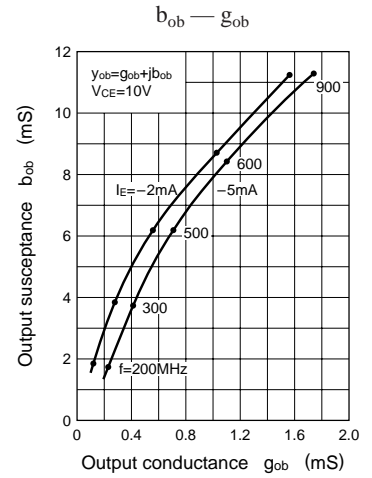
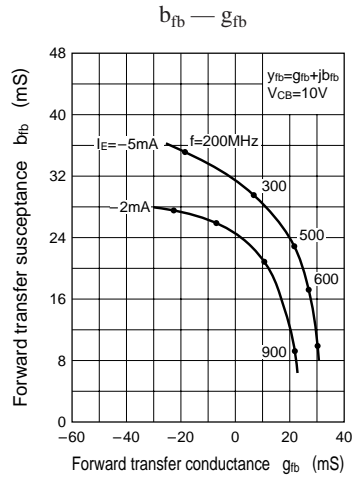
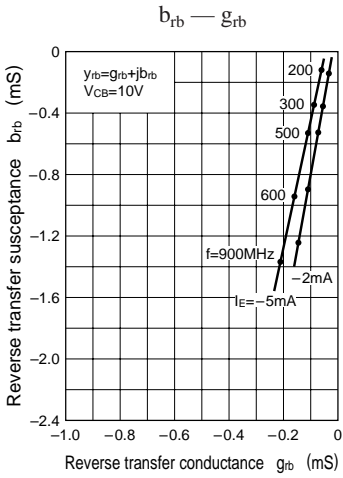
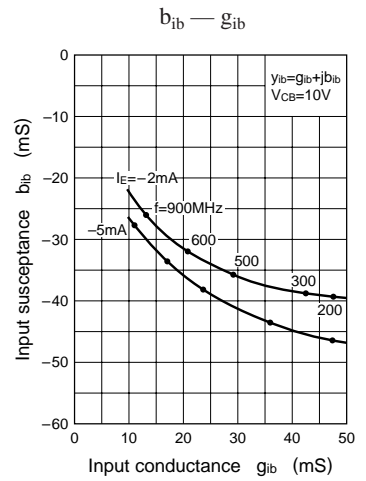
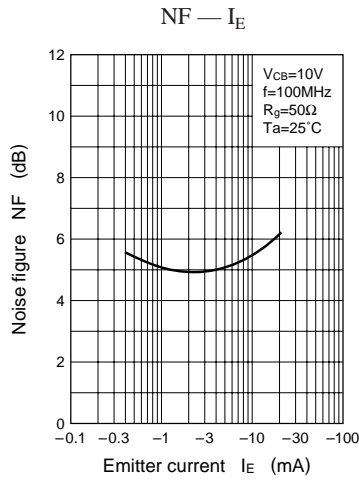
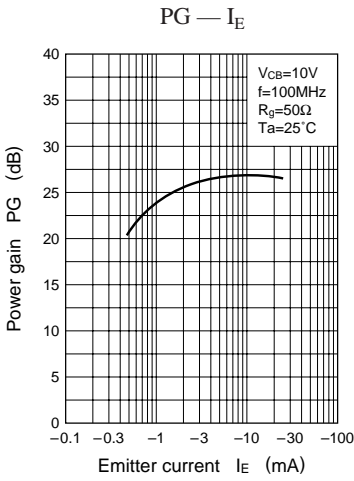
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V _{CB0}	I _C = 10μA, I _E = 0	45			V
Collector to emitter voltage	V _{CEO}	I _C = 1mA, I _B = 0	35			V
Emitter to base voltage	V _{EBO}	I _E = 10μA, I _C = 0	4			V
Collector cutoff current	I _{CEO}	V _{CE} = 20V, I _B = 0			10	μA
Forward current transfer ratio	h _{FE}	V _{CB} = 10V, I _E = -10mA	20	50	100	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 20mA, I _B = 2mA			0.5	V
Transition frequency	f _T	V _{CB} = 10V, I _E = -10mA, f = 100MHz	300	500		MHz
Common emitter reverse transfer capacitance	C _{re}	V _{CB} = 10V, I _E = -1mA, f = 10.7MHz			1.5	pF
Power gain	PG	V _{CB} = 10V, I _E = -10mA, f = 58MHz		18		dB

Common characteristics chart



Characteristics charts of Tr1





Characteristics charts of Tr2

