

XP5553

Silicon NPN epitaxial planer transistor

For amplification of the low frequency

■ Features

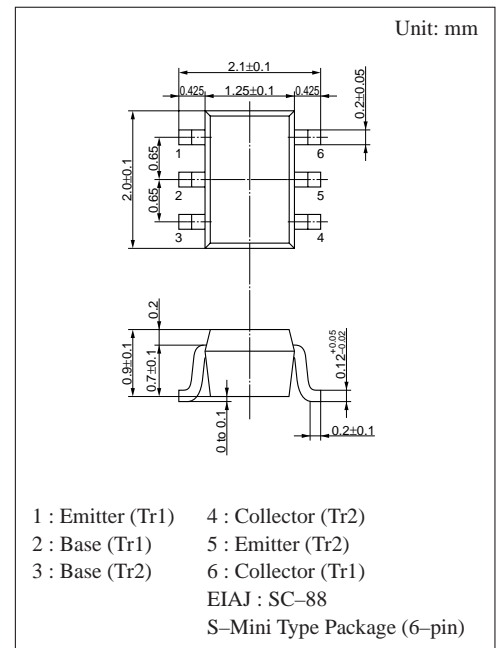
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

■ Basic Part Number of Element

- 2SD1149 × 2 elements

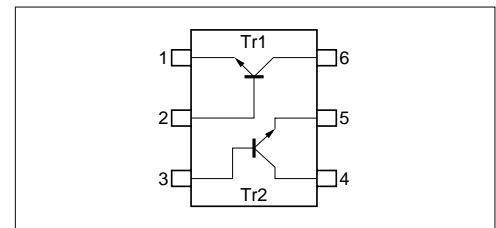
■ Absolute Maximum Ratings (Ta=25°C)

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



Marking Symbol: 4U

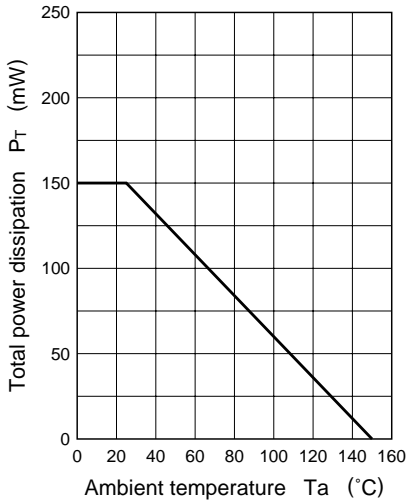
Internal Connection



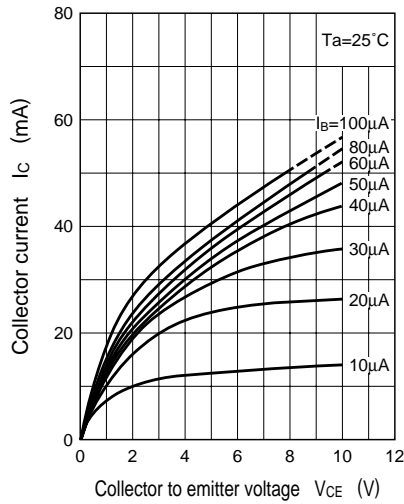
■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = 10\mu A, I_E = 0$	100			V
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	100			V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	15			V
Collector cutoff current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			0.1	μA
	I_{CEO}	$V_{CE} = 60V, I_B = 0$			1.0	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10V, I_C = 2mA$	400		2000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$		0.05	0.2	V
Noise voltage	NV	$V_{CE} = 10V, I_C = 1mA, G_v = 80dB$ $R_g = 100k\Omega, \text{Function} = \text{FLAT}$		80		mV
Transition frequency	f_T	$V_{CB} = 10V, I_E = -2mA, f = 200MHz$		150		MHz

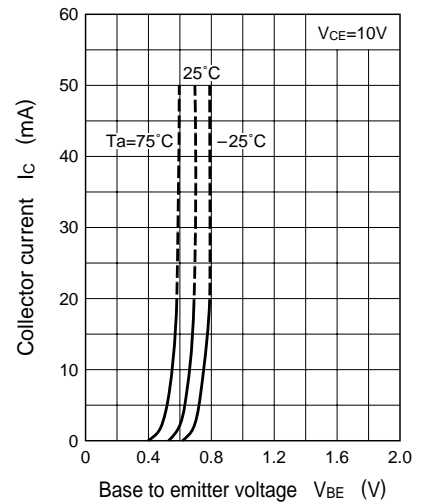
$P_T - T_a$



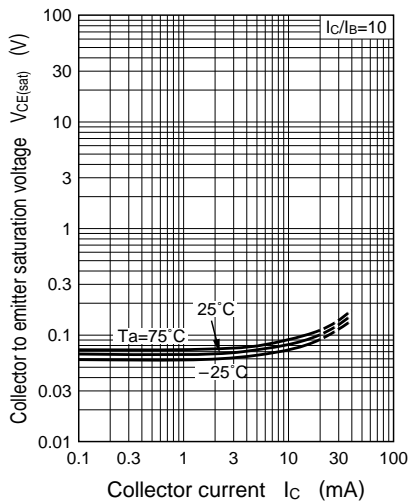
$I_C - V_{CE}$



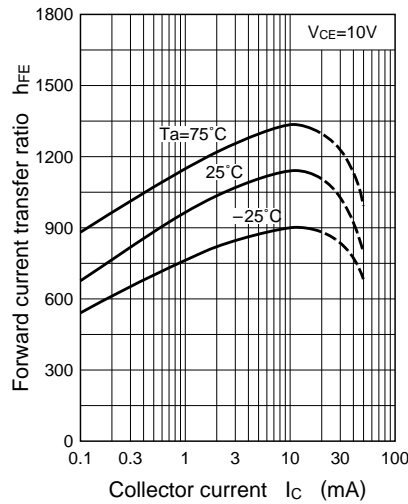
$I_C - V_{BE}$



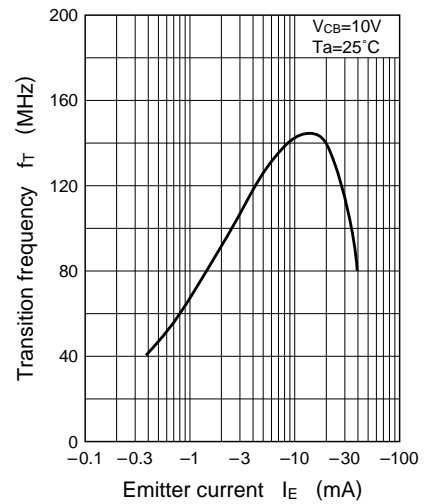
$V_{CE(sat)} - I_C$



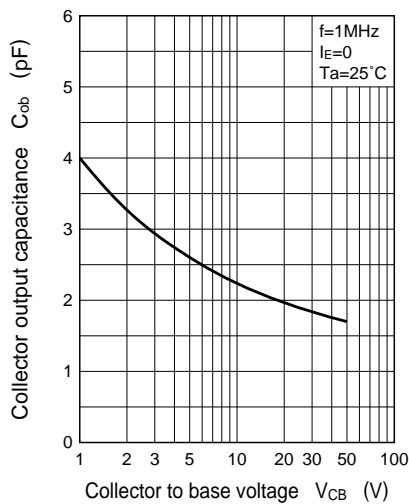
$h_{FE} - I_C$



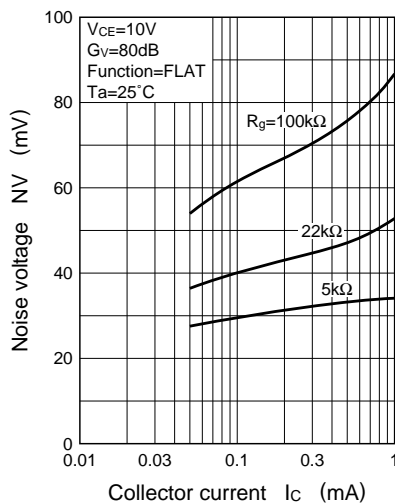
$f_T - I_E$



$C_{ob} - V_{CB}$



$NV - I_C$



$NV - V_{CE}$

