

XP4506

Silicon NPN epitaxial planer transistor

For amplification of low frequency output

■ Features

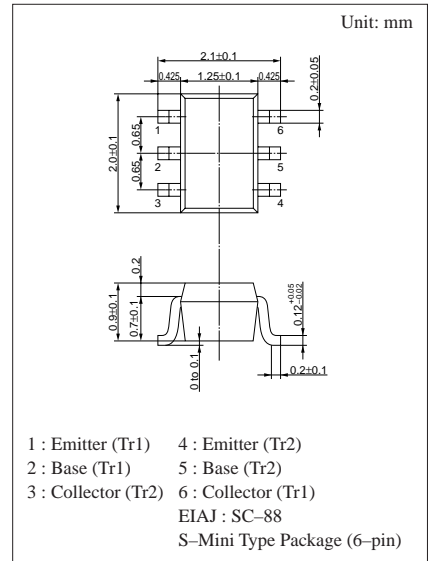
- High emitter to base voltage V_{EBO} .
- High forward current transfer ratio h_{FE} .
- Low ON resistor R_{on} .

■ Basic Part Number of Element

- 2SD1915F × 2 elements

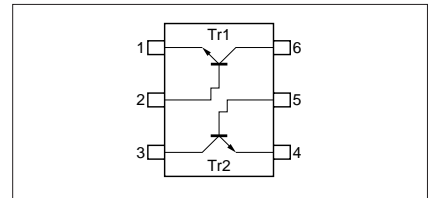
■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit	
Rating of element	Collector to base voltage	V_{CBO}	50	V
	Collector to emitter voltage	V_{CEO}	20	V
	Emitter to base voltage	V_{EBO}	25	V
	Collector current	I_C	300	mA
	Peak collector current	I_{CP}	500	mA
Overall	Total power dissipation	P_T	150	mW
	Junction temperature	T_j	150	°C
	Storage temperature	T_{sig}	-55 to +150	°C



Marking Symbol: EN

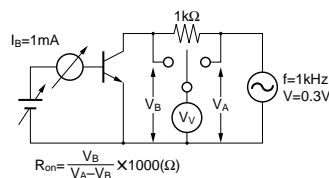
Internal Connection



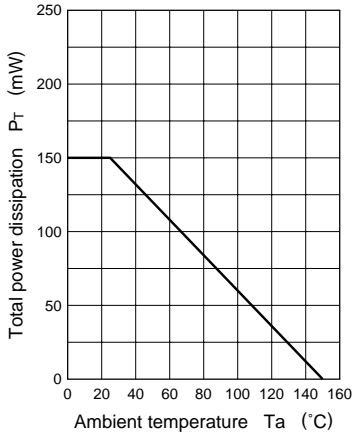
■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	20			V
Collector cutoff current	I_{CBO}	$V_{CB} = 50V, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 25V, I_C = 0$			0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 2V, I_C = 4mA$	500		2500	
Base to emitter voltage	V_{BE}	$V_{CE} = 2V, I_C = 4mA$		0.6		V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 30mA, I_B = 3mA$			0.1	V
Transition frequency	f_T	$V_{CB} = 6V, I_E = -4mA, f = 200MHz$		80		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$			7	pF
ON Resistance	R_{on}^{*1}			1		Ω

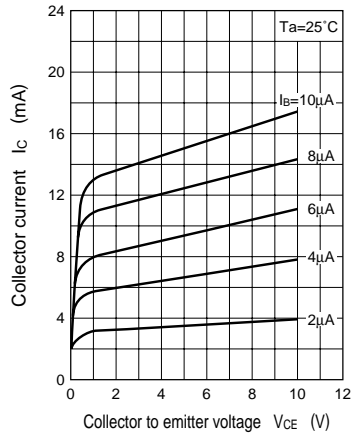
*1 R_{on} measuring circuit



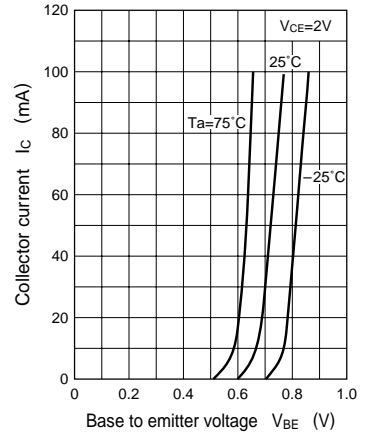
$P_T - T_a$



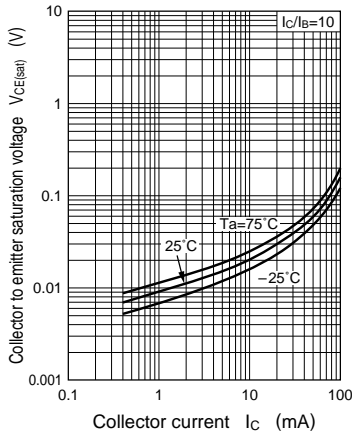
$I_C - V_{CE}$



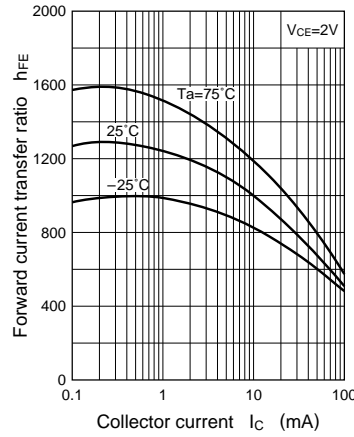
$I_C - V_{BE}$



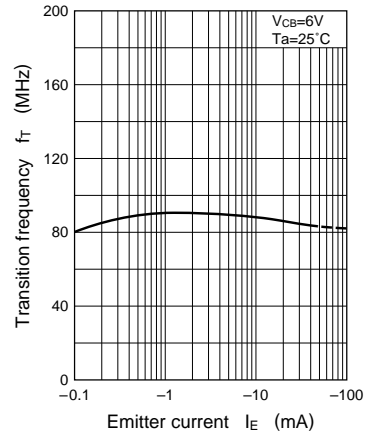
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

