

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

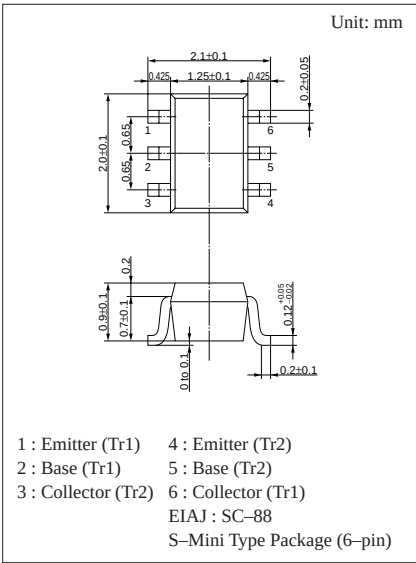
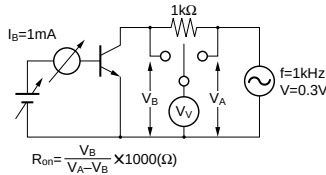
■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

	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	$^\circ\text{C}$
	Storage temperature	T_{sig}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

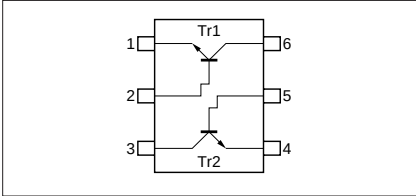
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = 1\text{mA}, I_B = 0$	20			V
Collector cutoff current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 25\text{V}, I_C = 0$			0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE}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

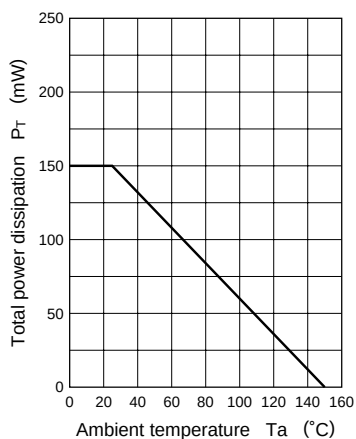
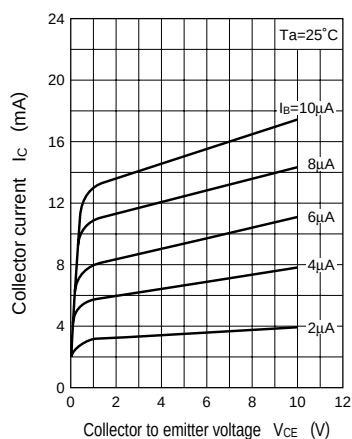
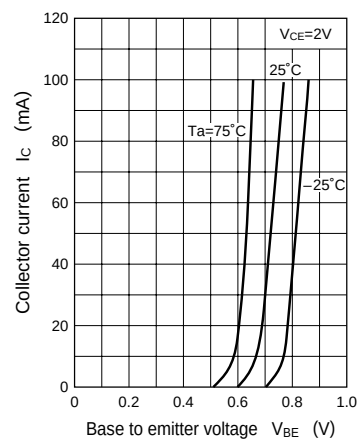
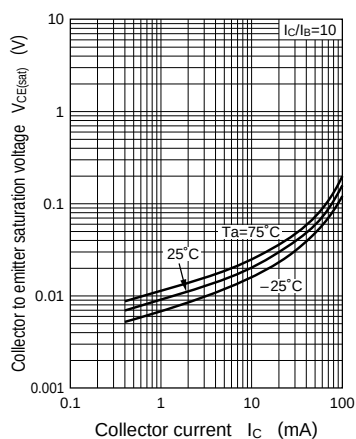
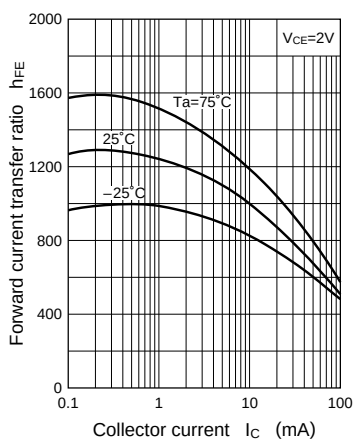
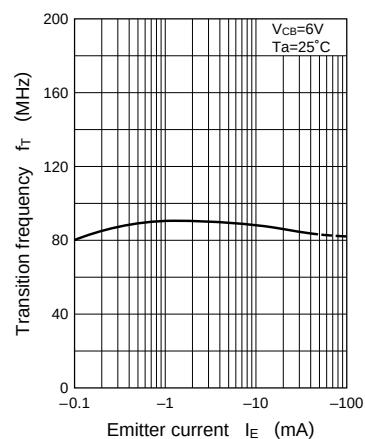
*1 R_{on} measuring circuit



Marking Symbol: EN

Internal Connection



$P_T - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 