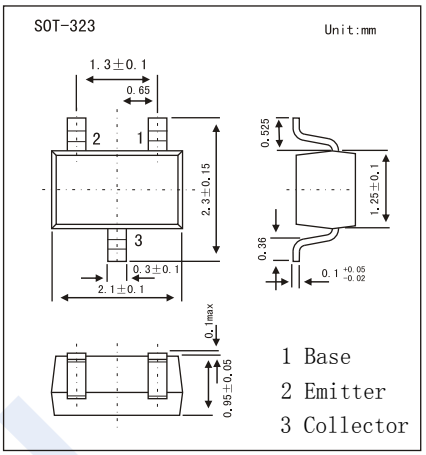
PNP Transistors

2SB1220



■ Features

- High collector to emitter voltage V_{CEO}.
- Low noise voltage NV.
- Complementary to 2SD1821

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-150	V
Collector - Emitter Voltage	V_{CEO}	-150	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-50	mA
Collector Current - Pulse	I_{CP}	-100	
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA, I_E=0	-150			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-150			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -100V , I_E=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V , I_C=0			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-30 mA, I_B=-3mA			-1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-30 mA, I_B=-3mA			-1.2	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -10 mA	130		450	
Noise voltage	NV	V_{CE} = –10V, I_C = –1mA, G_V= 80dB, R_g = 100kΩ , Function = FLAT		150		mV
Collector output capacitance	C_{ob}	V_{CB}= -10V, I_E= 0,f=1MHz		4		pF
Transition frequency	f_T	V_{CE}= -10V, I_E= 10 mA,f=200MHz		200		MHz

■ Classification of h_{fe}

Type	2SB1220-R	2SB1220-S	2SB1220-T
Range	130-220	185-330	260-450
Marking	IR	IS	IT

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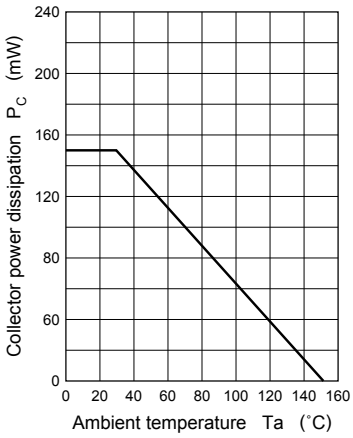
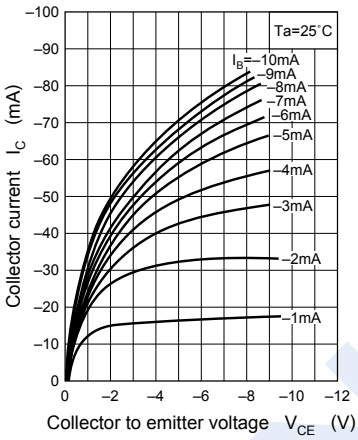
■ Typical Characterisitics

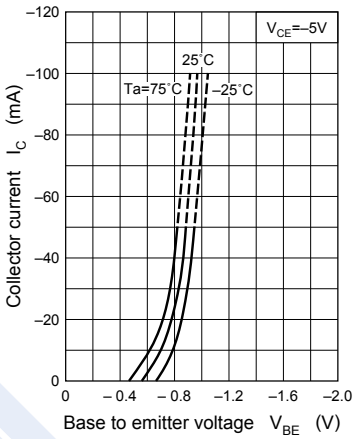
P_C — Ta



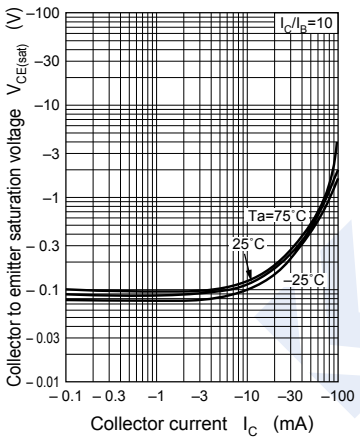
I_C — V_{CE}



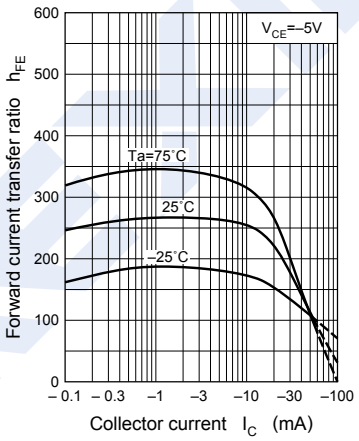
I_C — V_{BE}



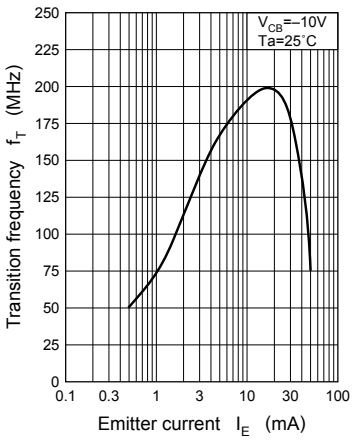
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}