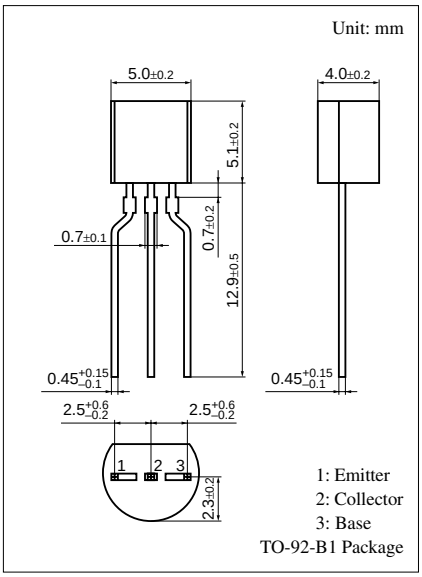
2SB0621, 2SB0621A (2SB621, 2SB621A)

Silicon PNP epitaxial planar type

For low-frequency output amplification

Complementary to 2SD0592 (2SD592) and 2SD0592A (2SD592A)



■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- High transition frequency f_T

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage	2SB0621	V_{CBO}	−30	V
	2SB0621A		−60	
Collector to emitter voltage	2SB0621	V_{CEO}	−25	V
	2SB0621A		−50	
Emitter to base voltage		V_{EBO}	−5	V
Peak collector current		I_{CP}	−1.5	A
Collector current		I_C	−1	A
Collector power dissipation		P_C	750	mW
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C$

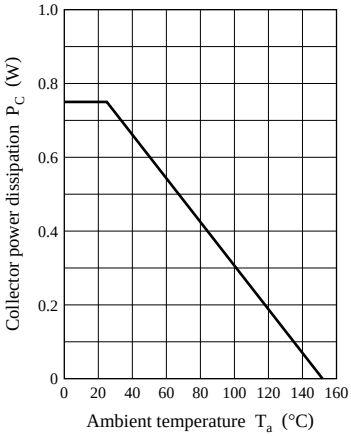
Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current		I_{CBO}	$V_{CB} = -20$ V, $I_E = 0$			− 0.1	μA
Collector to base voltage	2SB0621	V_{CBO}	$I_C = -10$ μA, $I_E = 0$	−30			V
	2SB0621A			−60			
Collector to emitter voltage	2SB0621	V_{CEO}	$I_C = -2$ mA, $I_B = 0$	−25			V
	2SB0621A			−50			
Emitter to base voltage		V_{EBO}	$I_E = -10$ μA, $I_C = 0$	−5			V
Forward current transfer ratio		h_{FE1} *	$V_{CE} = -10$ V, $I_C = -500$ mA	85		340	
		h_{FE2}	$V_{CE} = -5$ V, $I_C = -1$ A	50			
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500$ mA, $I_B = -50$ mA		− 0.2	− 0.4	V
Base to emitter saturation voltage		$V_{BE(sat)}$	$I_C = -500$ mA, $I_B = -50$ mA		− 0.85	−1.2	V
Transition frequency		f_T	$V_{CB} = -10$ V, $I_E = 50$ mA, f = 200 MHz		200		MHz
Collector output capacitance		C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		20	30	pF

Note) *: h_{FE} Rank classification

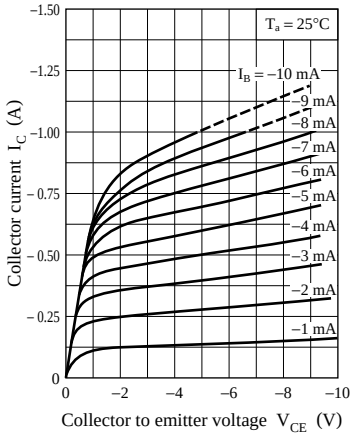
Rank	Q	R	S
h_{FE1}	85 to 170	120 to 240	170 to 340

Note) The part numbers in the parenthesis show conventional part number.

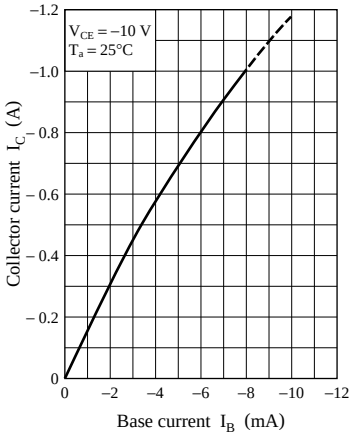
P_C — T_a



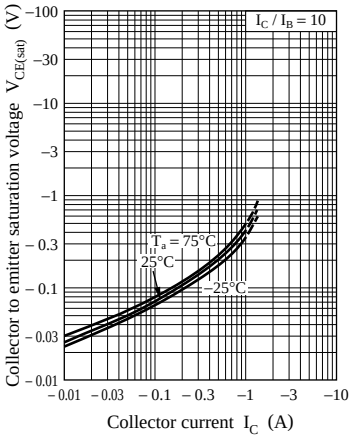
I_C — V_{CE}



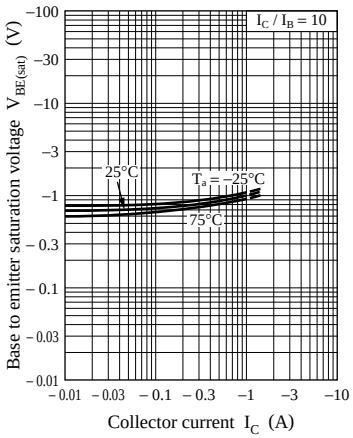
I_C — I_B



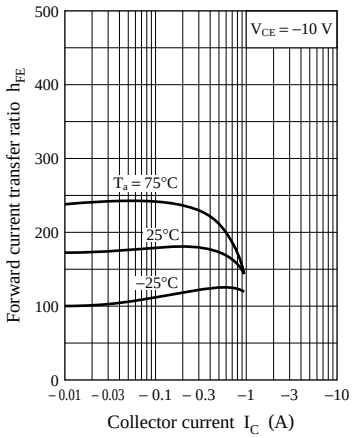
$V_{CE(sat)}$ — I_C



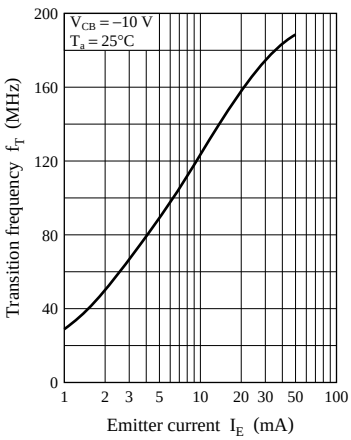
$V_{BE(sat)}$ — I_C



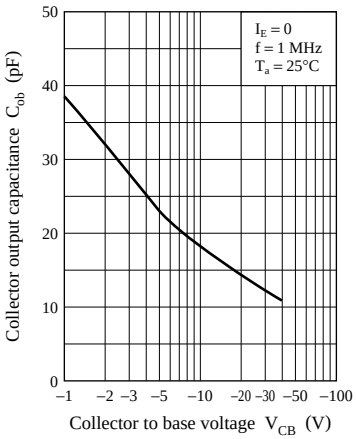
h_{FE} — I_C



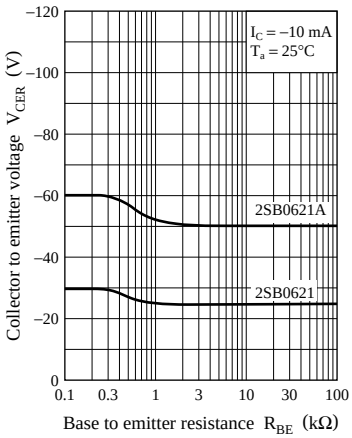
f_T — I_E



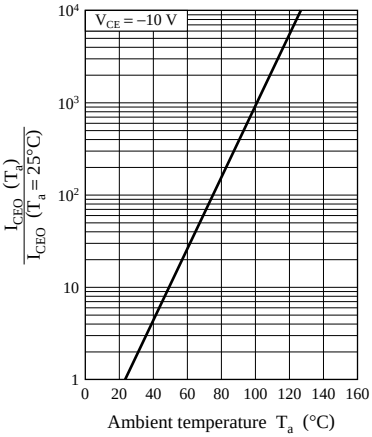
C_{ob} — V_{CB}



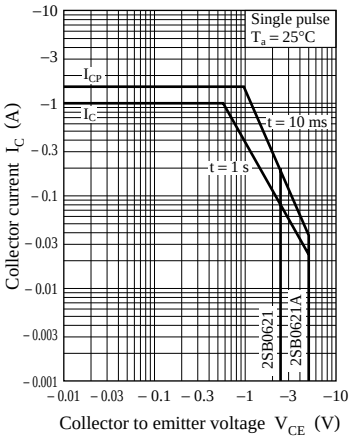
V_{CER} — R_{BE}



I_{CEO} — T_a



Area of safe operation (ASO)



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