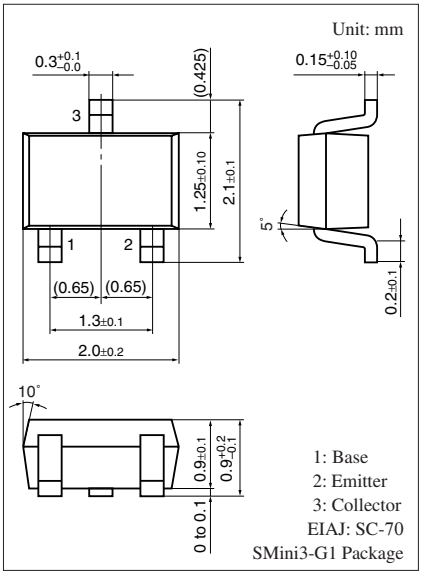
2SD2623

Silicon NPN epitaxial planar type

For low-frequency amplification



Internal Connection: 2V

■ Features

- Low on-resistance R_{on}
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	25	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	12	V
Collector current	I_C	0.5	A
Peak collector current	I_{CP}	1	A
Collector current	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 2°C$

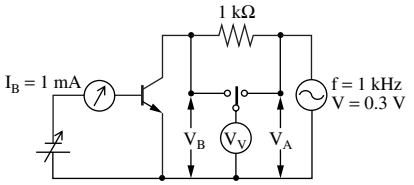
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V_{CBO}	I_C = 10 µA, I_E = 0	25			V
Collector to emitter voltage	V_{CEO}	I_C = 1 mA, I_B = 0	20			V
Emitter to base voltage	V_{EBO}	I_E = 10 µA, I_C = 0	12			V
Collector cutoff current	I_{CBO}	V_{CB} = 25 V, I_E = 0			100	nA
Forward current transfer ratio *1, 2	h_{FE}	V_{CE} = 2 V, I_C = 0.5 A	200		800	
Collector to emitter saturation voltage *1	$V_{CE(sat)}$	I_C = 0.5 A, I_B = 20 mA		0.14	0.4	V
Base to emitter saturation voltage *1	$V_{BE(sat)}$	I_C = 0.5 A, I_B = 50 mA			1.2	V
Collector output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		10		pF
Gain bandwidth product	f_T	V_{CB} = 10 V, I_E = −50 mA, f = 200 MHz		200		MHz
On resistance *3	R_{on}			1.0		Ω

Note) ∗1: Pulse measurement

∗2: h_{FE} Rank classification

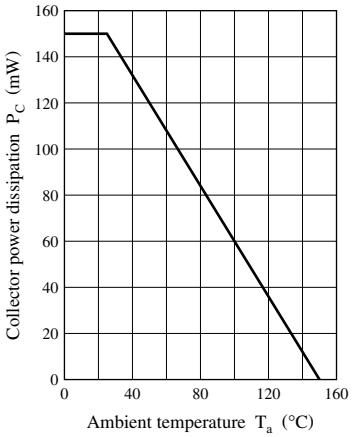
Rank	R	S	T
h_{FE}	200 to 350	300 to 500	400 to 800

∗3: R_{on} start resistance test circuit

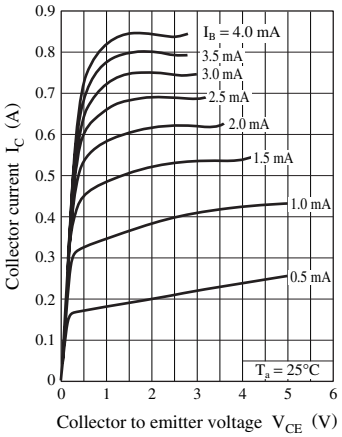


$$R_{on} = \frac{V_B \times 1\,000}{V_A - V_B}\,(\Omega)$$

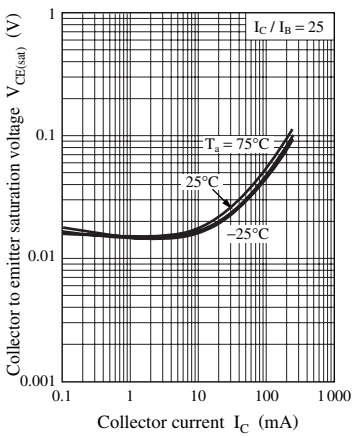
P_C — T_a



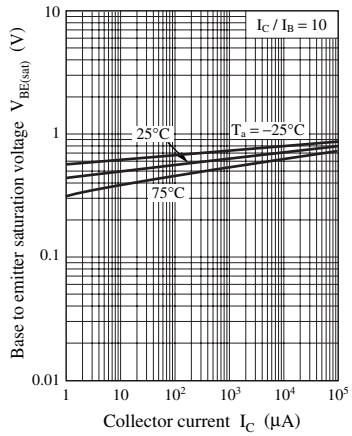
I_C — V_{CE}



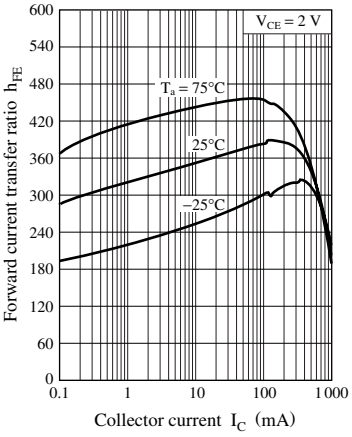
$V_{CE(sat)}$ — I_C



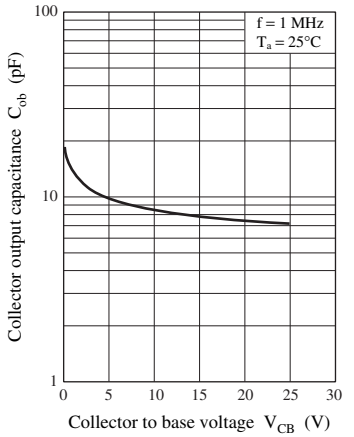
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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