XN01558

Silicon NPN epitaxial planar type

For low-frequency amplification

■ Features

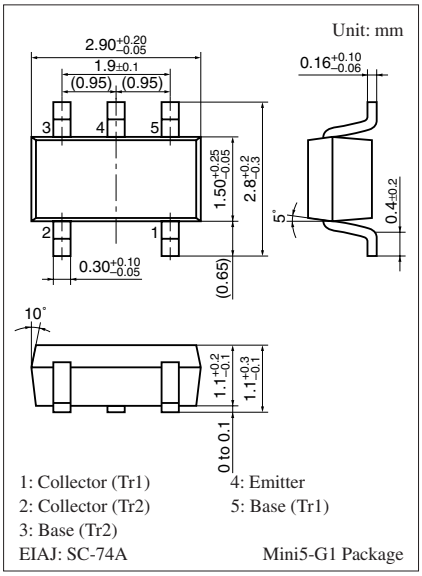
- Two elements incorporated into one package (Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

- 2SD2623 × 2

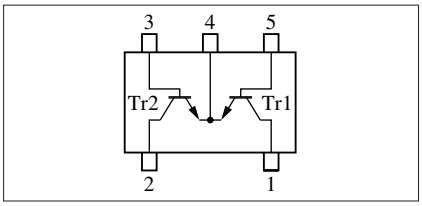
■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	25	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	12	V
Collector current	I_C	0.5	A
Peak collector current	I_{CP}	1	A
Total power dissipation	P_T	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C



Marking Symbol: 4Z

Internal Connection

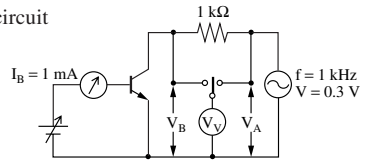


■ Electrical Characteristics $T_a = 25°C \pm 3°C$

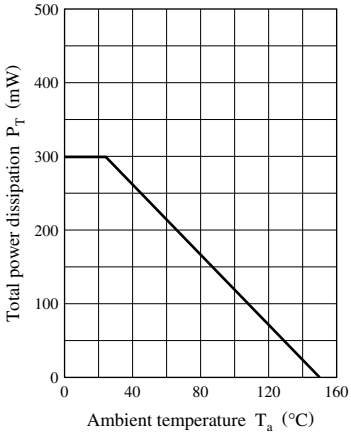
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	25			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	20			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	12			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 25 V, I_E = 0			100	nA
Forward current transfer ratio *1	h_{FE}	V_{CE} = 2 V, I_C = 0.5 A	200		800	—
h_{FE} ratio *1, 2	$h_{FE(Small/Large)}$	V_{CE} = 2 V, I_C = 0.5 A	0.50	0.99		—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	I_C = 0.5 A, I_B = 20 mA		0.14	0.40	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	I_C = 0.5 A, I_B = 50 mA			1.2	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = –50 mA, f = 200 MHz		200		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		10		pF
ON resistanse *3	R_{on}			1.0		Ω

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *1: Pulse measurement
*2: Ratio between one and another device

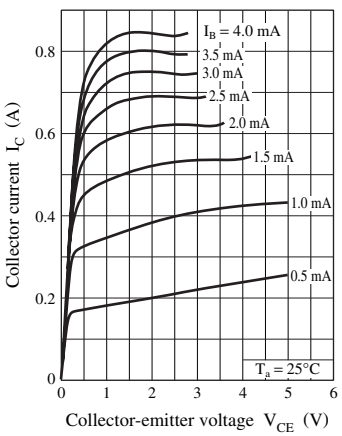
*3: R_{on} test circuit



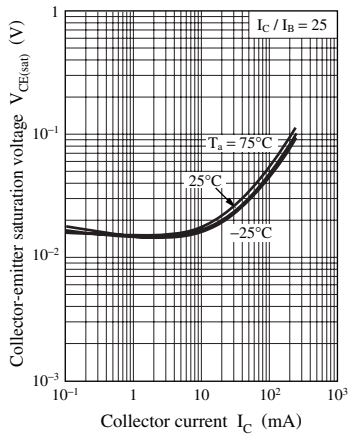
P_T — T_a



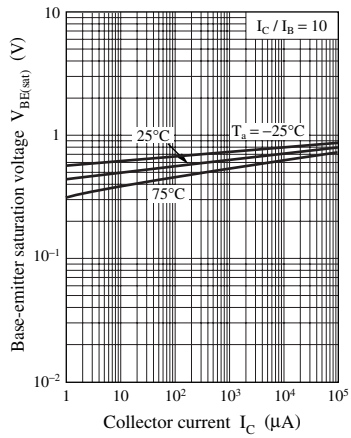
I_C — V_{CE}



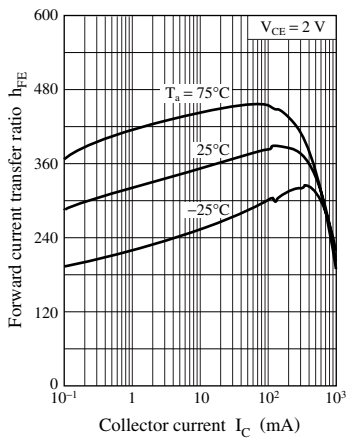
$V_{CE(sat)}$ — I_C



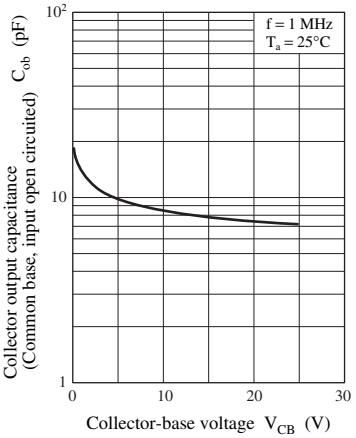
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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