

# XN01558

## Silicon NPN epitaxial planar transistor

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 of Element

- 2SD2623 × 2 elements

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

Parameter		Symbol	Rating	Unit
Rating of element	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
Total	Total power dissipation	$P_T$	300	mW
	Junction temperature	$T_j$	150	$^\circ\text{C}$
	Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

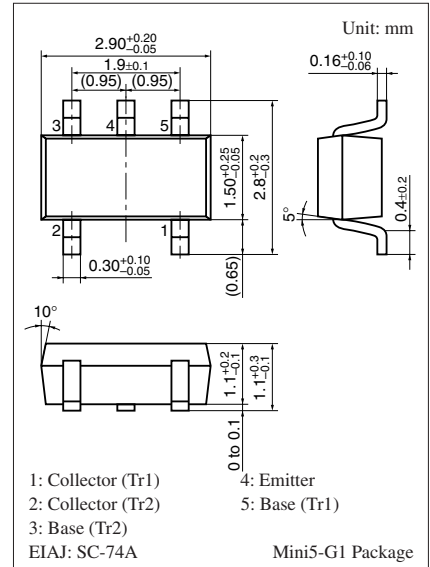
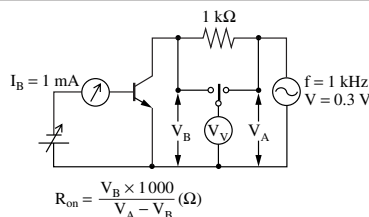
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = 10 \mu\text{A}, I_E = 0$	25			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	20			V
Emitter to base voltage	$V_{EBO}$	$I_C = 10 \mu\text{A}, I_C = 0$	12			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 25 \text{ V}, I_E = 0$			100	nA
Forward current transfer ratio *1	$h_{FE}$	$V_{CE} = 2 \text{ V}, I_C = 0.5 \text{ A}$	200		800	
$h_{FE}$ ratio *1, 2	$h_{FE(\text{Small/Large})}$	$V_{CE} = 2 \text{ V}, I_C = 0.5 \text{ A}$	0.5	0.99		
Collector to emitter saturation voltage *1	$V_{CE(\text{sat})}$	$I_C = 0.5 \text{ A}, I_B = 20 \text{ mA}$		0.14	0.4	V
Base to emitter saturation voltage *1	$V_{BE(\text{sat})}$	$I_C = 0.5 \text{ A}, I_B = 50 \text{ mA}$			1.2	V
Gain bandwidth product	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		10		pF
On resistance *3	$R_{on}$			1.0		$\Omega$

Note) \*1: Pulse measurement

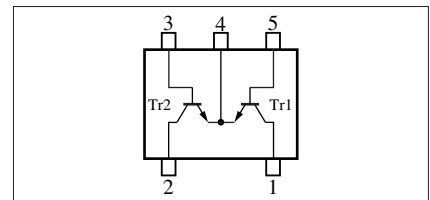
\*2: Ratio between one and another device

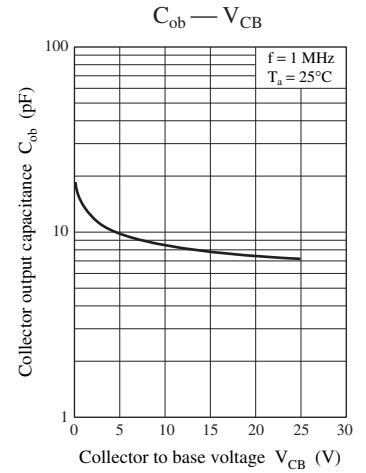
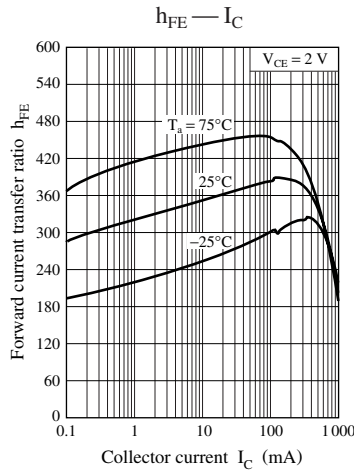
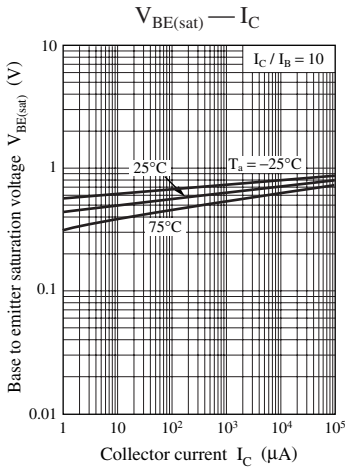
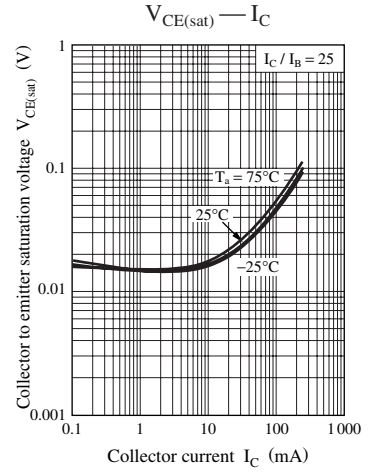
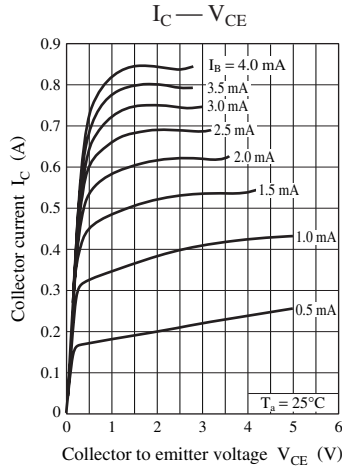
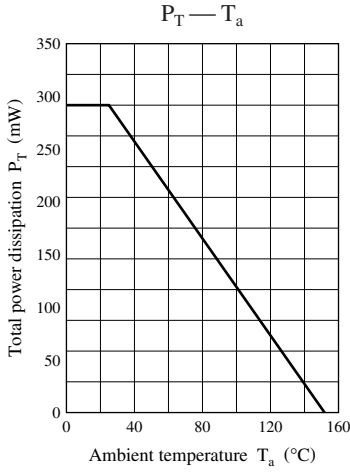
\*3:  $R_{on}$  start resistance test circuit



Marking Symbol: 4Z

Internal Connection





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