

# DSA2401

## Silicon PNP epitaxial planar type

For low frequency amplification

### ■ Features

- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Halogen-free / RoHS compliant  
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

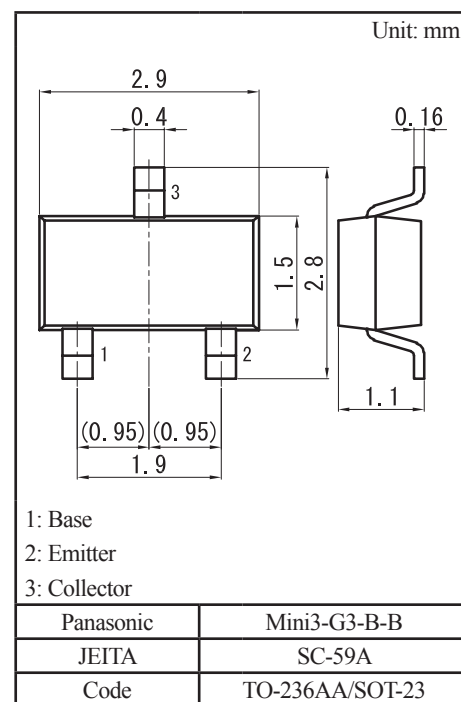
### ■ Marking Symbol: B1

### ■ Packaging

DSA2401×0L Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-15	V
Collector-emitter voltage (Base open)	$V_{CEO}$	-10	V
Emitter-base voltage (Collector open)	$V_{EBO}$	-7	V
Collector current	$I_C$	-0.5	A
Peak collector current	$I_{CP}$	-1	A
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



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

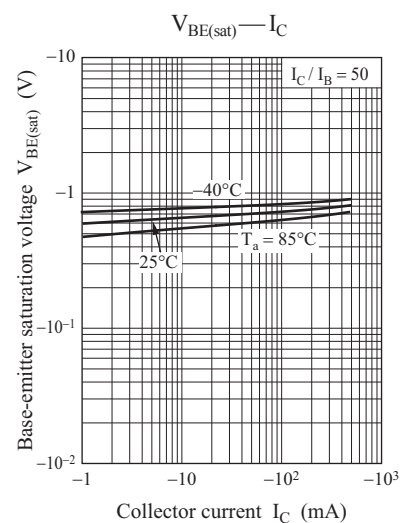
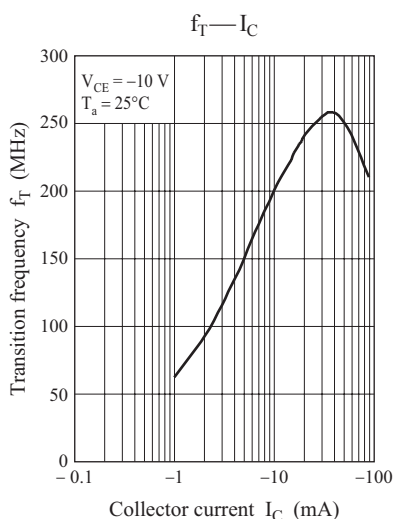
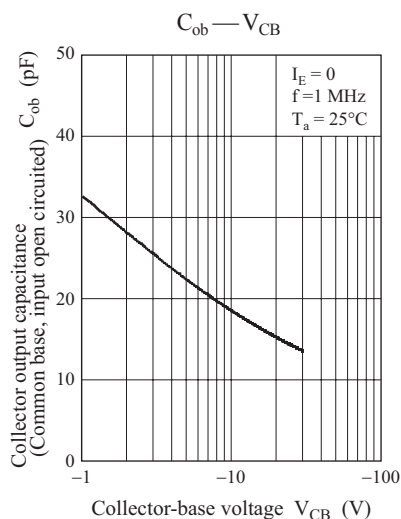
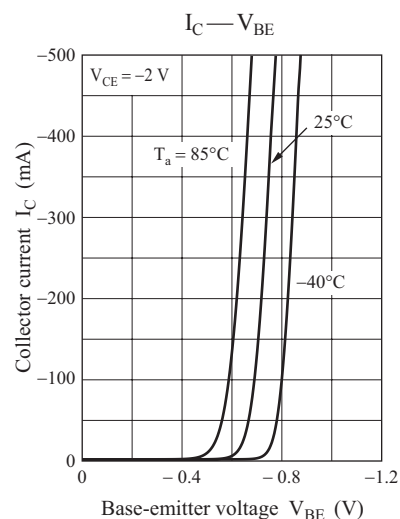
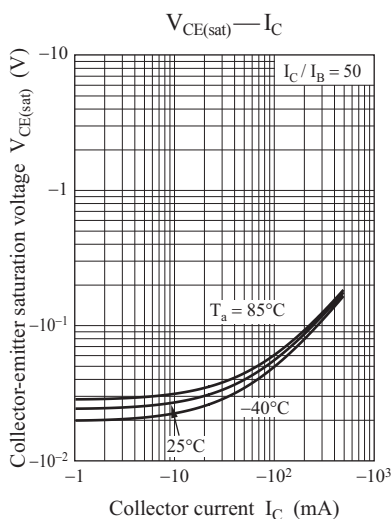
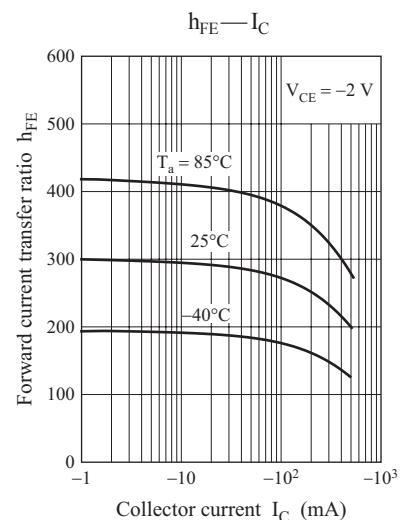
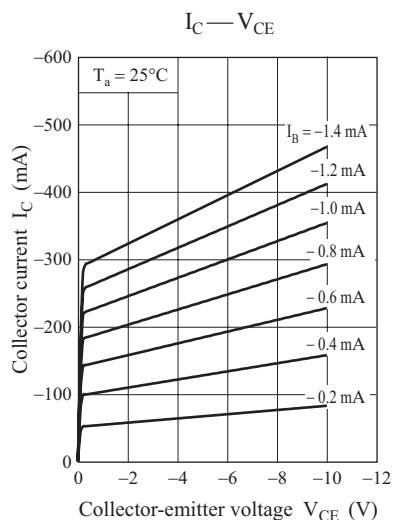
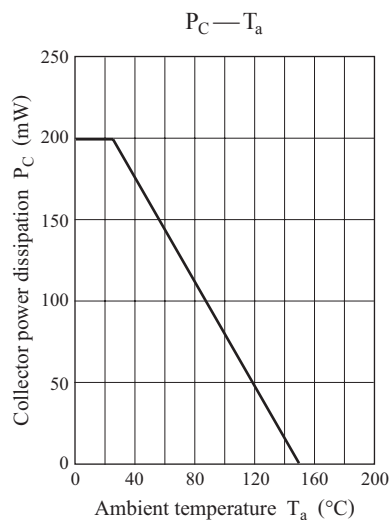
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = -10 \mu\text{A}$ , $I_E = 0$	-15			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -1 \text{ mA}$ , $I_B = 0$	-10			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \mu\text{A}$ , $I_C = 0$	-7			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$			-100	nA
Forward current transfer ratio *1	$h_{FE1}$ *2	$V_{CE} = -2 \text{ V}$ , $I_C = -0.5 \text{ A}$	130		350	—
	$h_{FE2}$	$V_{CE} = -2 \text{ V}$ , $I_C = -1 \text{ A}$	60			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -0.4 \text{ A}$ , $I_B = -8 \text{ mA}$		-0.15	-0.30	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = -0.4 \text{ A}$ , $I_B = -8 \text{ mA}$		-0.8	-1.2	V
Transition frequency	$f_T$	$V_{CE} = -10 \text{ V}$ , $I_C = -50 \text{ mA}$		250		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		18		pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Pulse measurement

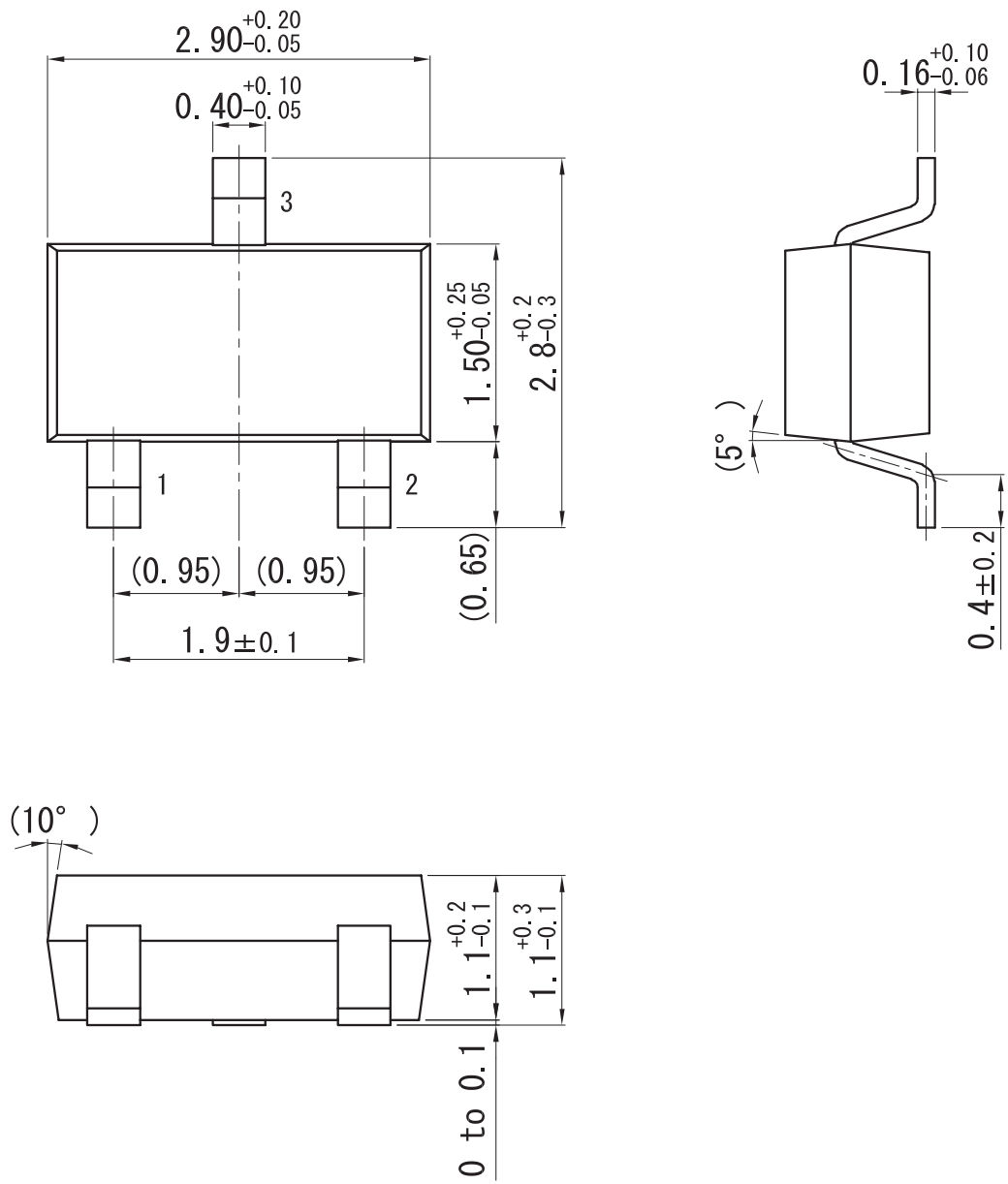
\*2: Rank classification

Code	R	S
Rank	R	S
$h_{FE1}$	130 to 220	180 to 350
Marking Symbol	B1R	B1S

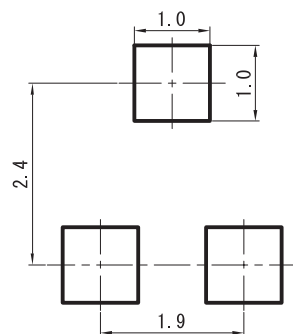


Mini3-G3-B-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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