

DSA9G01

Silicon NPN epitaxial planar type

For high-frequency amplification
DSA5G01 in SSMini3 type package

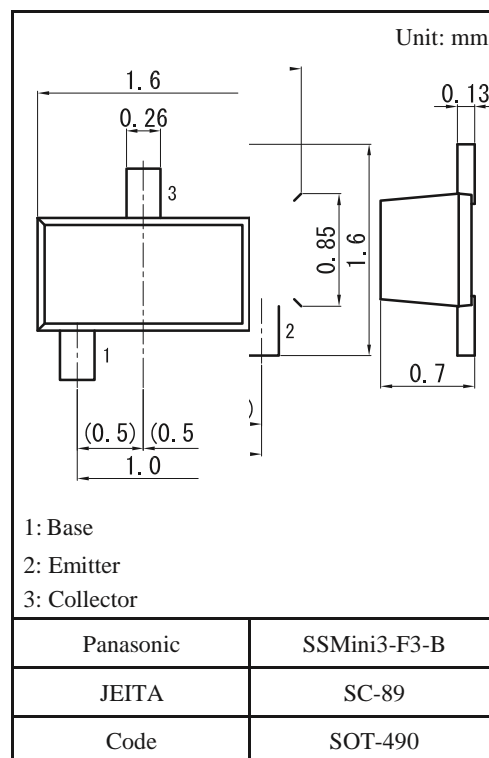
■ Features

- High transition frequency f_T
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

■ Marking Symbol: A4

■ Packaging

DSA9G01×0L Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)



1: Base
2: Emitter
3: Collector

Absolute Maximum

Ratings $T_a = 25^\circ\text{C}$

Electrical

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CB0}	-30	V
Collector-emitter voltage (Base open)	V_{CEO}	-20	V
Emitter-base voltage (Collector open)	V_{EBO}	-5	V
Collector current	I_C	-30	mA
Collector power dissipation	P_C	125	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	$^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Base-emitter voltage	V_{BE}	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}$		-0.7		V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10\text{ V}, I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -20\text{ V}, I_B = 0$			-100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-10	μA
Forward current transfer ratio ^{*1}	h_{FE}	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}$	70		220	\square
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$		-0.1		V
Transition frequency	f_T	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}$	150	300		MHz
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}, f = 10.7\text{ MHz}$		1.0		pF

Noise figure	NF	$V_{CE} = -10\text{ V}$, $I_C = -1\text{ mA}$, $f = 5\text{ MHz}$	2.8	dB
Reverse transfer impedance	Z_{rb}	$V_{CE} = -10\text{ V}$, $I_C = -1\text{ mA}$, $f = 2\text{ MHz}$	22	W

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

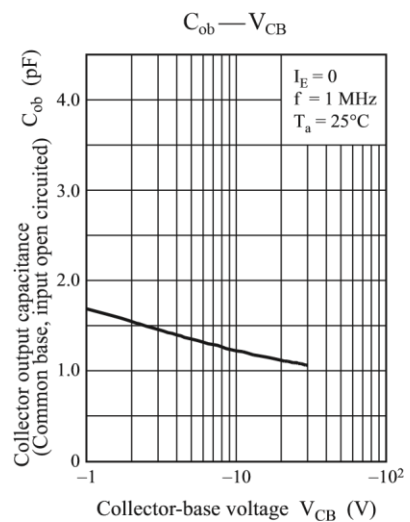
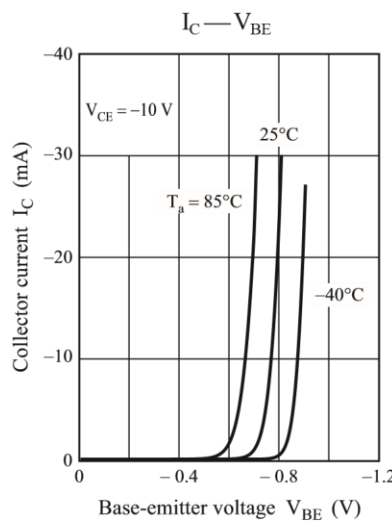
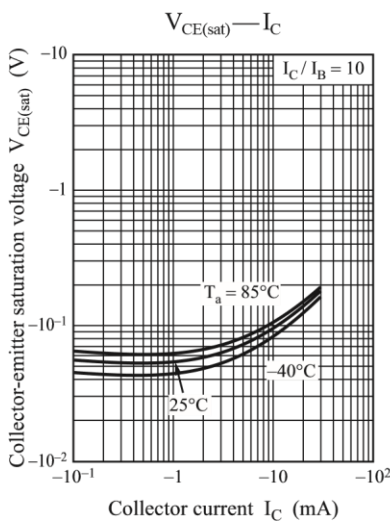
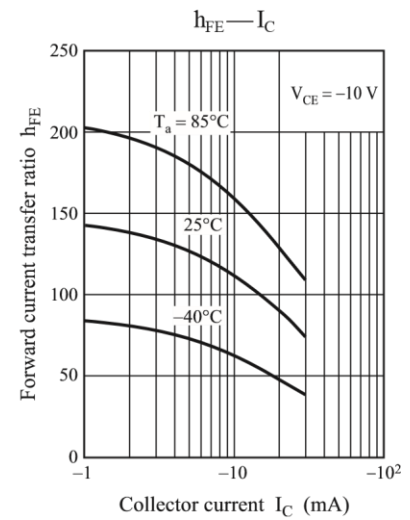
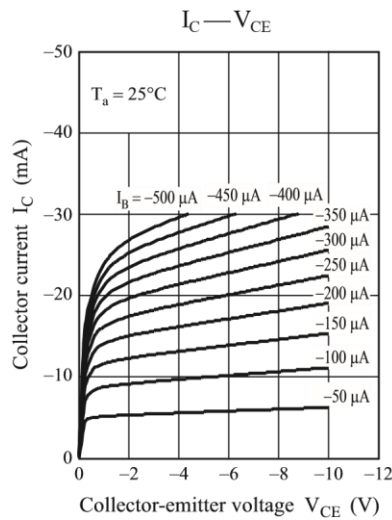
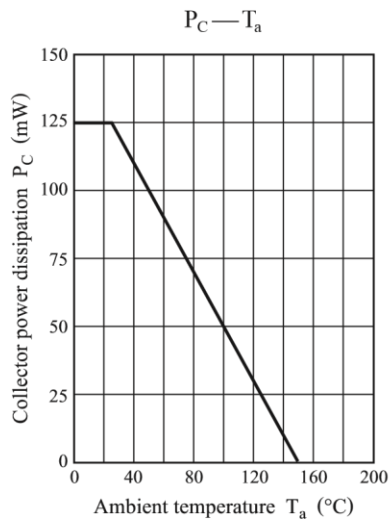
2. *1: Rank classification

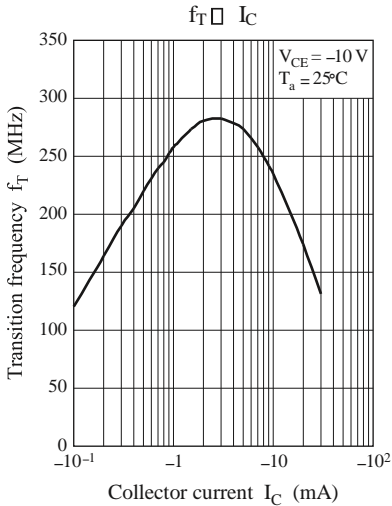
Code	B	C	0
Rank	B	C	No-rank
h_{FE}	70 to 140	110 to 220	70 to 220
Marking Symbol	A4B	A4C	A4

Product of no-rank is not classified and have no marking symbol for rank.

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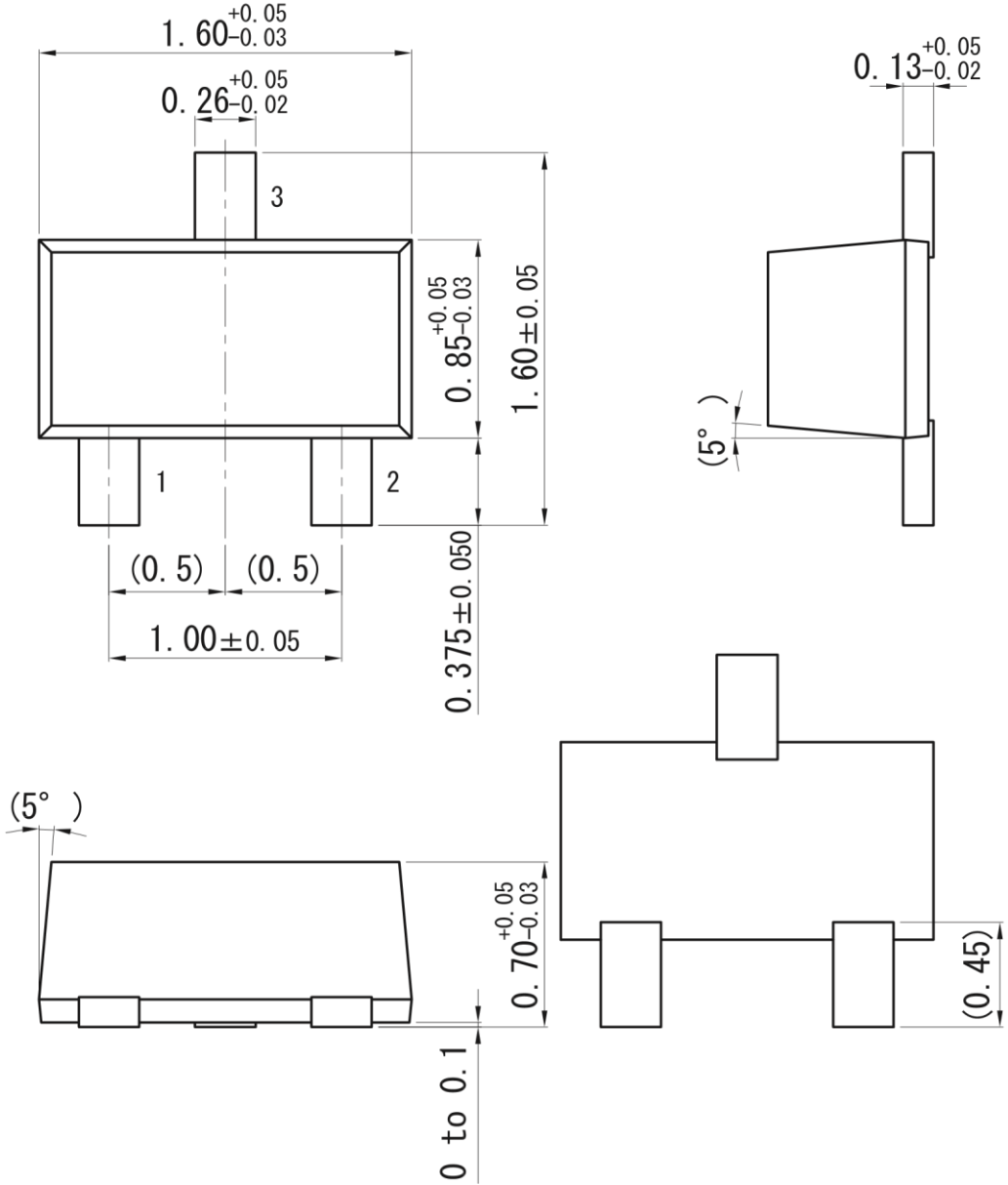




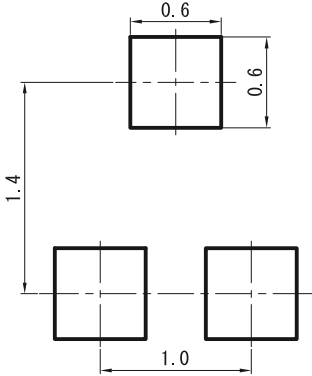
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SSMini3-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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