

DSA7U01

Silicon PNP epitaxial planar type

For Low-frequency amplifier

■ 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: 4H

■ Packaging

DSA7U01×0L Embossed type (Thermo-compression sealing): 1 000 pcs / reel (standard)

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-100	V
Collector-emitter voltage (Base open)	V_{CEO}	-100	V
Emitter-base voltage (Collector open)	V_{EBO}	-5	V
Collector current	I_C	-0.5	A
Peak collector current	I_{CP}	-1	A
Collector power dissipation ^{*1}	P_C	1	W
Junction temperature	T_j	150	°C
Operating ambient temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note) ^{*1}: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

Absolute maximum rating without heat sink for P_C is 0.5 W

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -100 \mu\text{A}$, $I_B = 0$	-100			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}$, $I_C = 0$	-5			V
Forward current transfer ratio ^{*1}	h_{FE1} ^{*2}	$V_{CE} = -10 \text{ V}$, $I_C = -150 \text{ mA}$	90		220	—
	h_{FE2}	$V_{CE} = -5 \text{ V}$, $I_C = -500 \text{ mA}$	50			
Collector-emitter saturation voltage ^{*1}	$V_{CE(sat)}$	$I_C = -500 \text{ mA}$, $I_B = -50 \text{ mA}$		-0.2	-0.6	V
Base-emitter saturation voltage ^{*1}	$V_{BE(sat)}$	$I_C = -500 \text{ mA}$, $I_B = -50 \text{ mA}$		-0.9	-1.2	V
Transition frequency	f_T	$V_{CE} = -10 \text{ V}$, $I_C = -50 \text{ mA}$		120		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$			30	pF

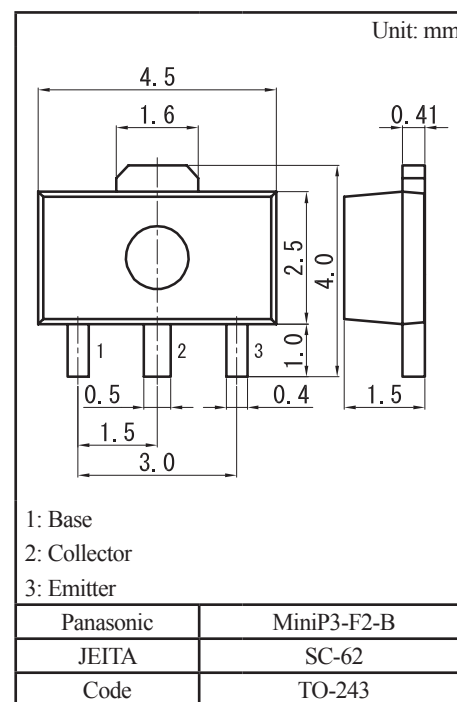
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

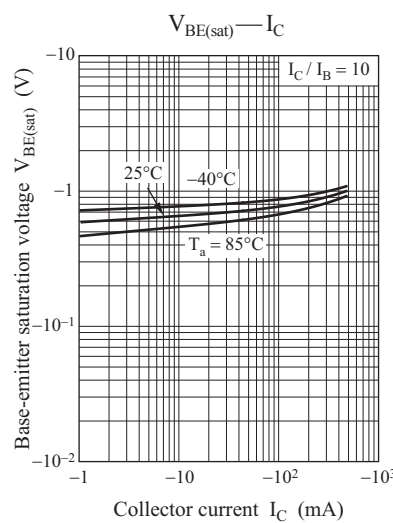
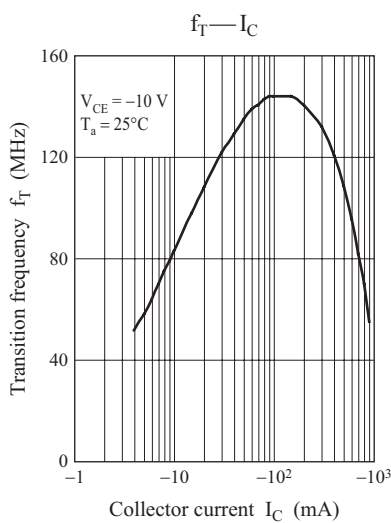
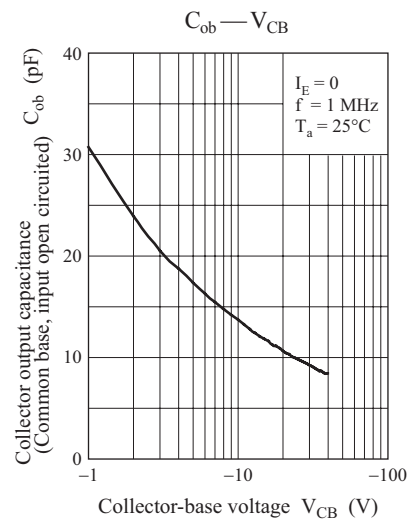
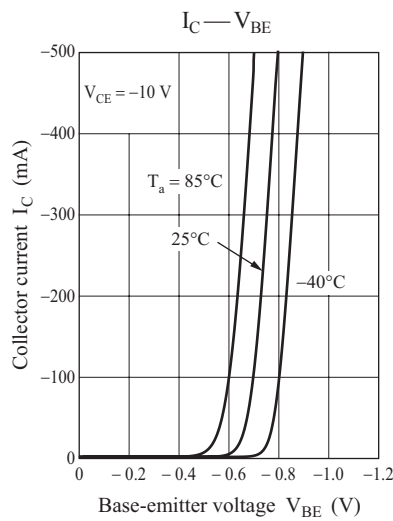
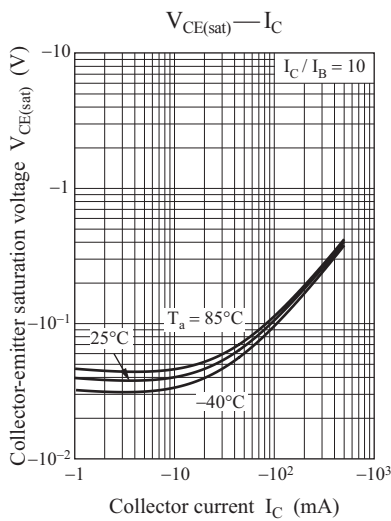
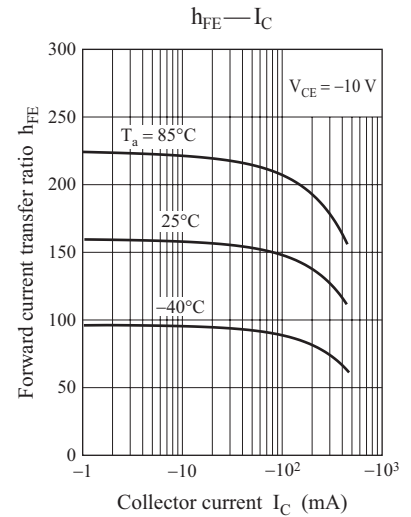
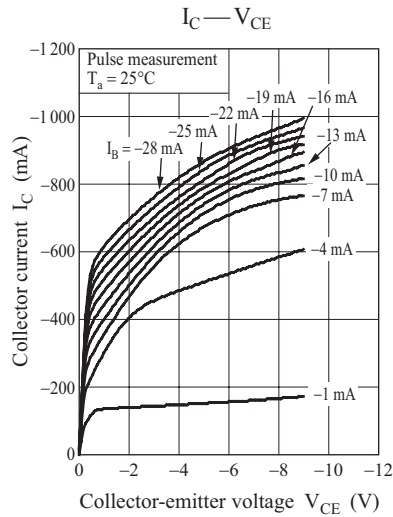
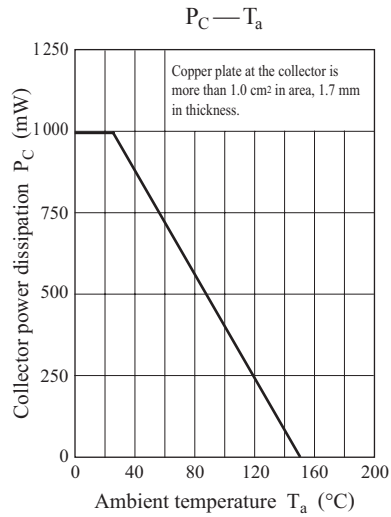
2. ^{*1}: Pulse measurement

^{*2}: Rank classification

Code	Q	R	0
Rank	Q	R	No-rank
h_{FE1}	90 to 155	130 to 220	90 to 220
Marking Symbol	4HQ	4HR	4H

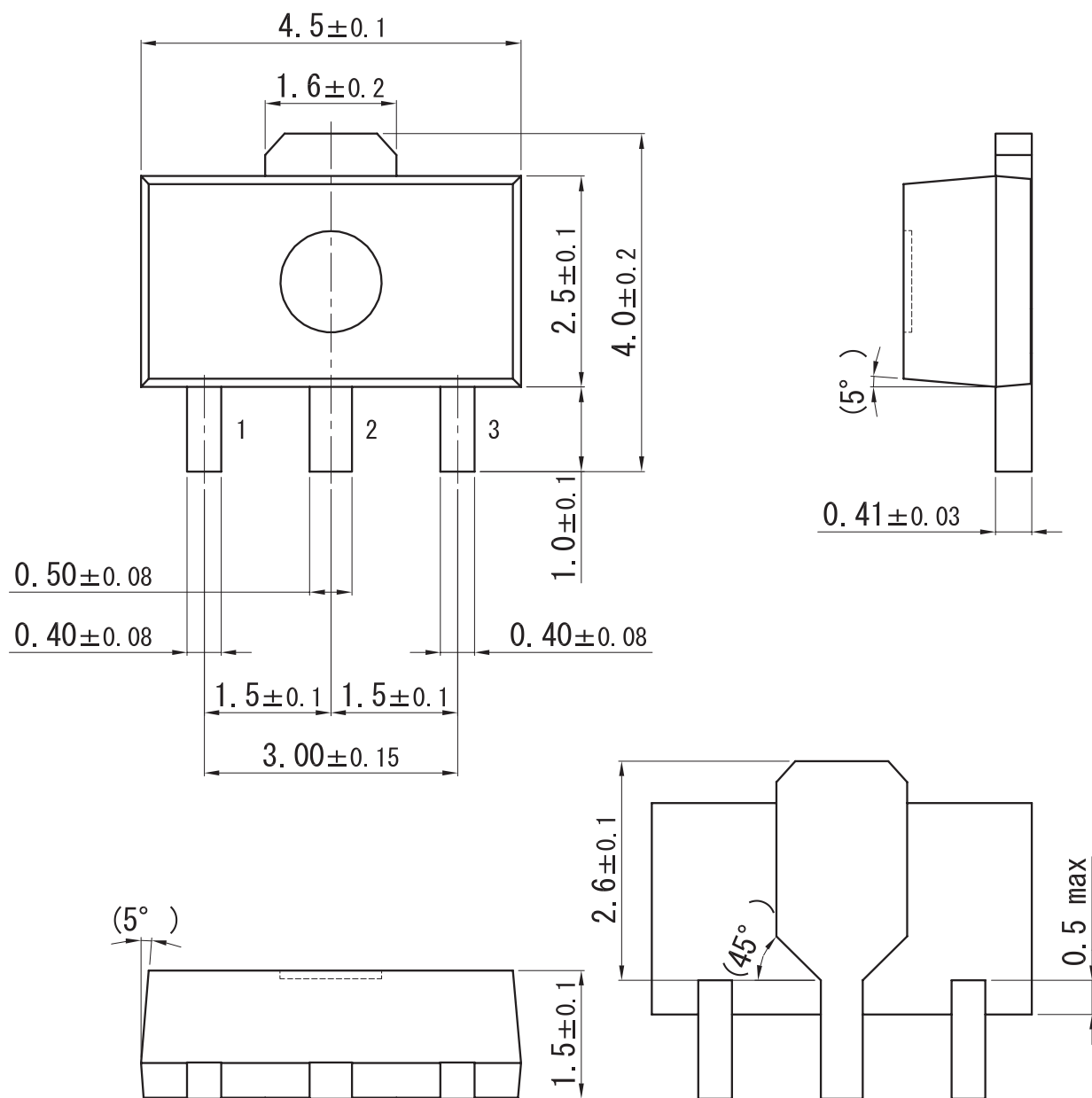
Product of no-rank is not classified and have no marking symbol for rank.



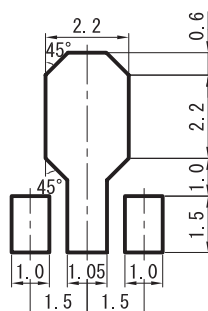


MiniP3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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