DSA7101

Silicon PNP epitaxial planar type

For low frequency amplification
Complementary to DSC7101

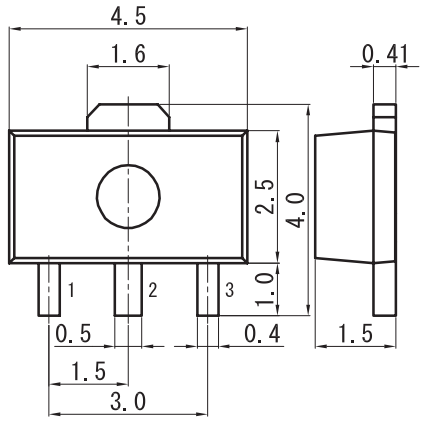
■ Features

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

■ Marking Symbol: 4C

■ Packaging

DSA7101×0L Embossed type (Thermo-compression sealing): 1 000 pcs / reel (standard)



1: Base
2: Collector
3: Emitter

Panasonic	MiniP3-F2-B
JEITA	SC-62
Code	TO-243

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	–80	V
Collector-emitter voltage (Base open)	V_{CEO}	–80	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 cm^2 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 $T_a = 25°C \pm 3°C$

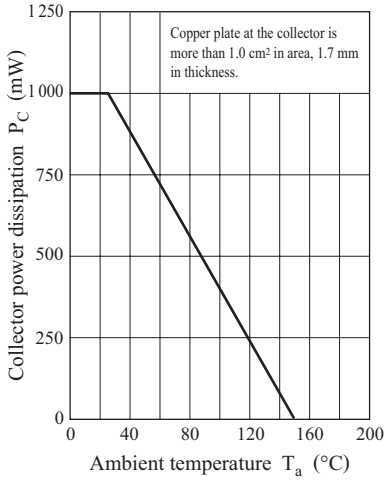
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = –10$ μA, $I_E = 0$	–80			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = –100$ μA, $I_B = 0$	–80			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = –10$ μA, $I_C = 0$	–5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = –20$ V, $I_E = 0$			– 0.1	μA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = –10$ V, $I_C = –150$ mA	90		220	—
	h_{FE2}	$V_{CE} = –5$ V, $I_C = –500$ mA	50	100		
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = –300$ mA, $I_B = –30$ mA		– 0.2	– 0.4	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = –300$ mA, $I_B = –30$ mA		– 0.9	–1.2	V
Transition frequency	f_T	$V_{CE} = –10$ V, $I_C = –50$ mA		120		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = –10$ V, $I_E = 0$, f = 1 MHz		10	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

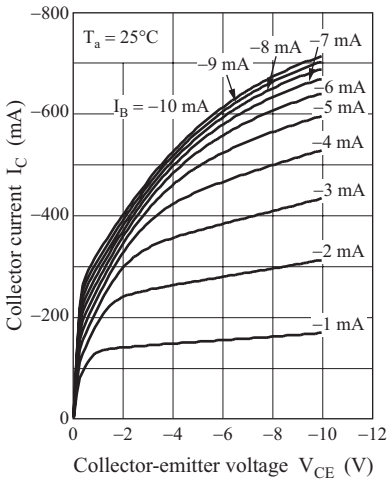
Code	Q	R	0
Rank	Q	R	No-rank
h_{FE1}	90 to 155	130 to 220	90 to 220
Marking Symbol	4CQ	4CR	4C

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

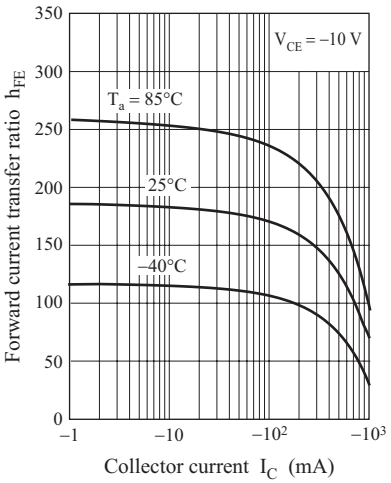
P_C — T_a



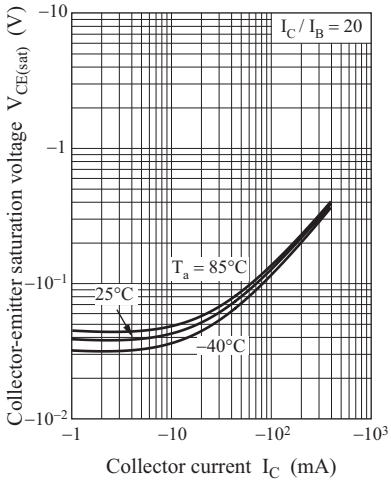
I_C — V_{CE}



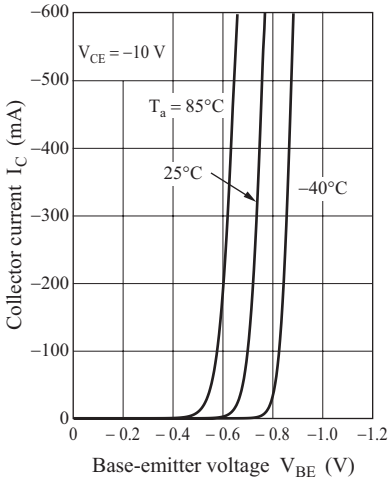
h_{FE} — I_C



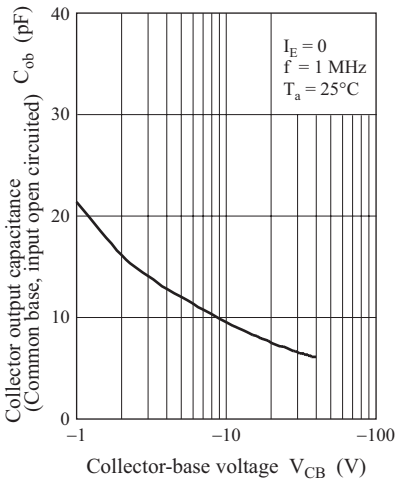
$V_{CE(sat)}$ — I_C



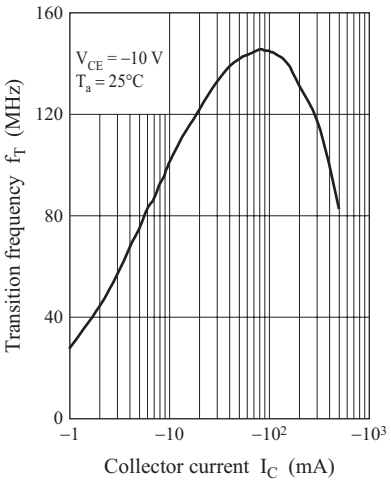
I_C — V_{BE}



C_{ob} — V_{CB}

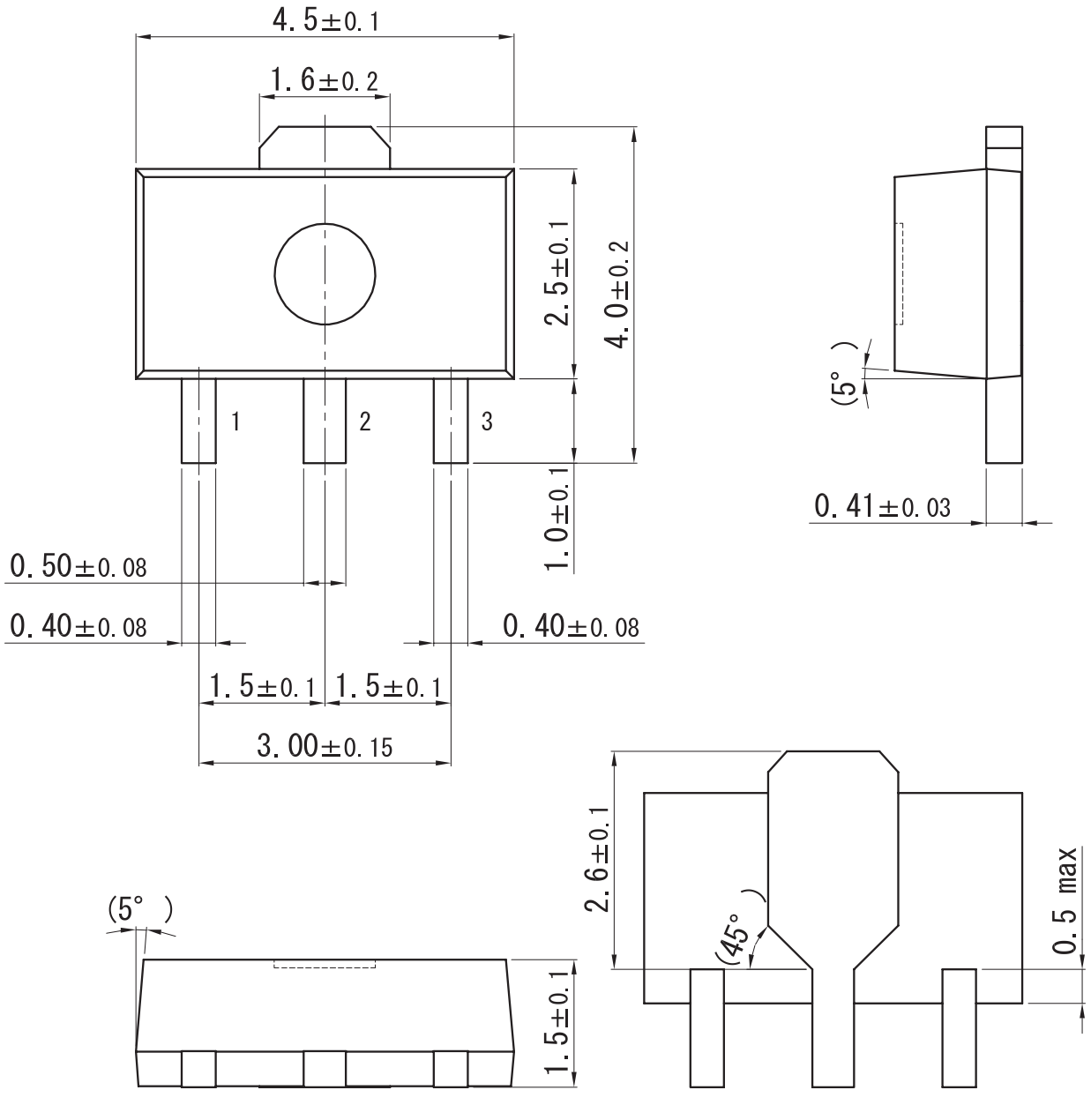


f_T — I_C

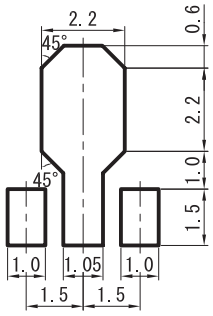


MiniP3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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