DSA7003

Silicon PNP epitaxial planar type

For low frequency output amplification
Complementary to DSC7003

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Eco-friendly Halogen-free package

■ Packaging

Embossed type (Thermo-compression sealing): 1000 pcs / reel (standard)

■ Package

- Code
  MiniP3-F2-B
- Pin Name
  1. Base
  2. Collector
  3. Emitter

■ Marking Symbol: 4A

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	–60	V
Collector-emitter voltage (Base open)	V_{CEO}	–50	V
Emitter-base voltage (Collector open)	V_{EBO}	–5	V
Collector current	I_C	–1	A
Peak collector current	I_{CP}	–1.5	A
Collector power dissipation *	P_C	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

Note) ∗: 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 $T_a = 25°C \pm 3°C$

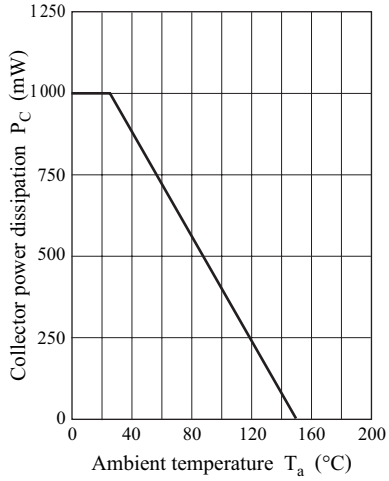
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = –10\ \mu A$, $I_E = 0$	–60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = –2$ mA, $I_B = 0$	–50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = –10\ \mu A$, $I_C = 0$	–5			V
Collector-base 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, $I_C = –500$ mA	120		340	—
	h_{FE2}	$V_{CE} = –5$ V, $I_C = –1$ A	50			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = –500$ mA, $I_B = –50$ mA			– 0.4	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = –500$ mA, $I_B = –50$ mA			–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		14.5	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

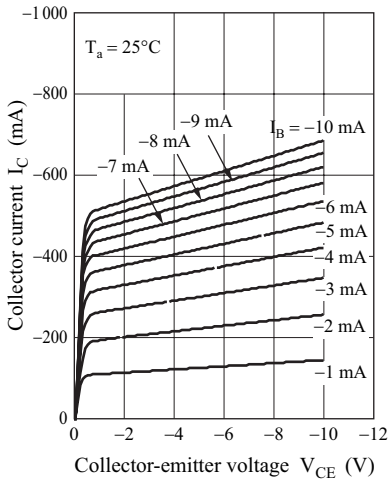
Code	R	S	0
Rank	R	S	No-rank
h_{FE1}	120 to 240	170 to 340	120 to 340
Marking Symbol	4AR	4AS	4A

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

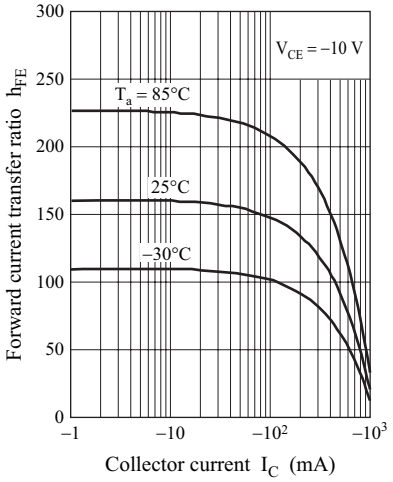
P_C — T_a



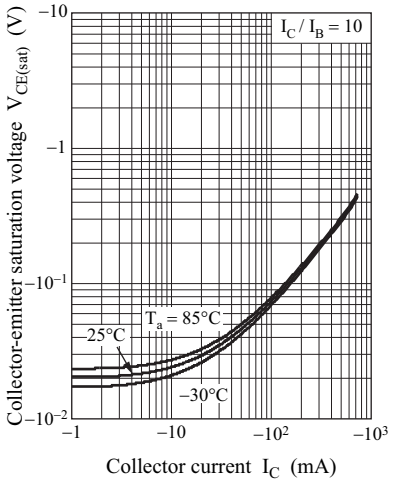
I_C — V_{CE}



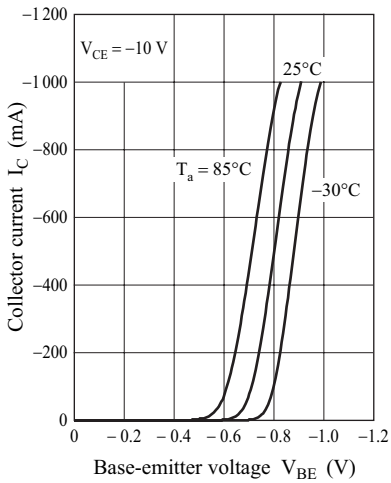
h_{FE} — I_C



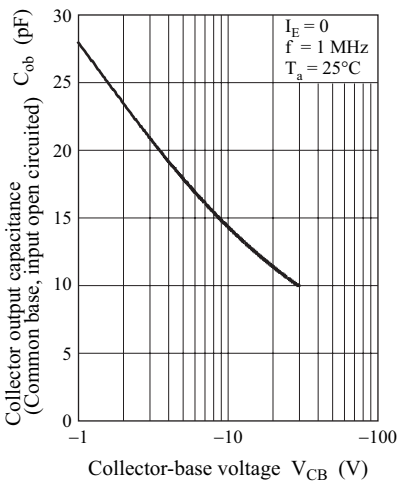
$V_{CE(sat)}$ — I_C



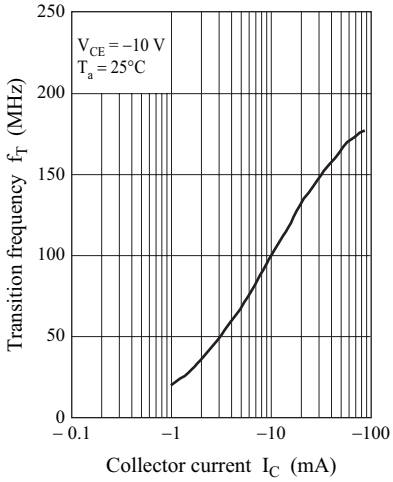
I_C — V_{BE}



C_{ob} — V_{CB}

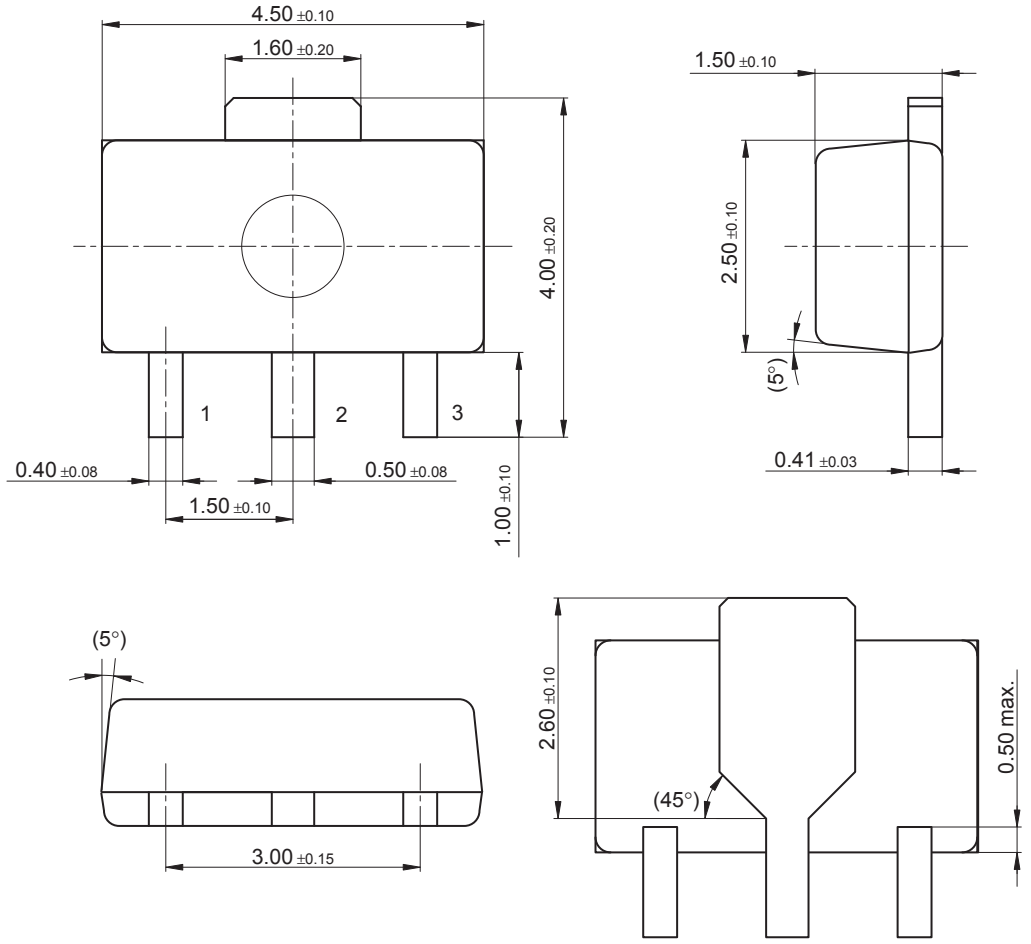


f_T — I_C



MiniP3-F2-B

Unit: mm



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