DSA5G01

Silicon NPN epitaxial planar type

For high-frequency amplification
DSA2G01 in SMini3 type package

■ Features

- High forward current transfer ratio h_{FE} with excellent linearity
- High transition frequency f_T
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Packaging

Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

■ Package

- Code
  SMini3-F2-B
- Pin Name
  1. Base
  2. Emitter
  3. Collector

■ Marking Symbol: A4

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	–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	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

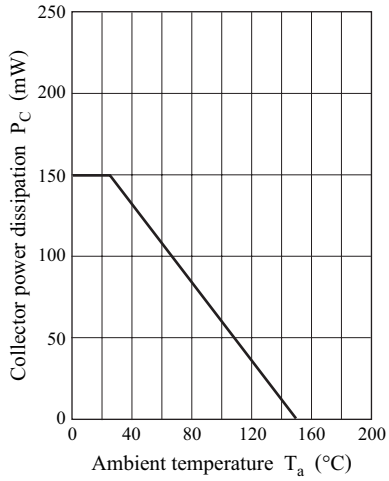
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Base-emitter voltage	V_{BE}	$V_{CE} = –10$ V, $I_C = –1$ mA		– 0.7		V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = –10$ V, $I_E = 0$			– 0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = –20$ V, $I_B = 0$			–100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = –5$ V, $I_C = 0$			–10	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = –10$ V, $I_C = –1$ mA	70		220	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = –10$ mA, $I_B = –1$ mA		– 0.1		V
Transition frequency	f_T	$V_{CE} = –10$ V, $I_C = –1$ mA	150	300		MHz
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CE} = –10$ V, $I_C = –1$ mA, f = 10.7 MHz		1.0		pF
Noise figure	NF	$V_{CE} = –10$ V, $I_C = –1$ mA, f = 5 MHz		2.8		dB
Reverse transfer impedance	Z_{rb}	$V_{CE} = –10$ V, $I_C = –1$ mA, f = 2 MHz		22		Ω

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

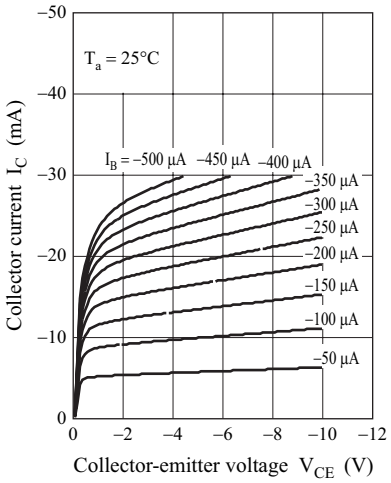
Code	B	C	0
Rank	B	C	No-rank
h_{FE}	70 to 140	110 to 220	70 to 220
Marking Symbol	A4B	A4C	A4

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

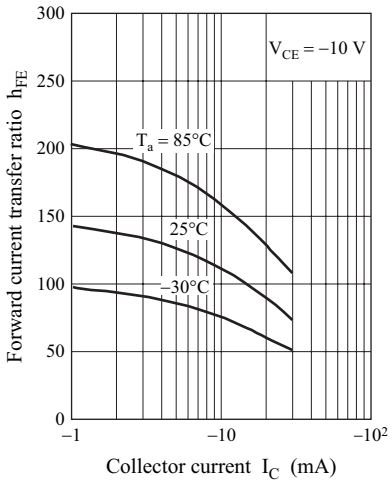
P_C — T_a



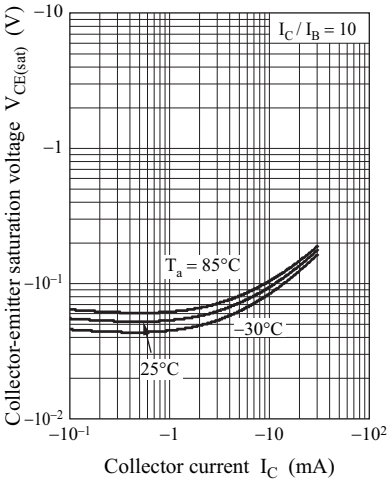
I_C — V_{CE}



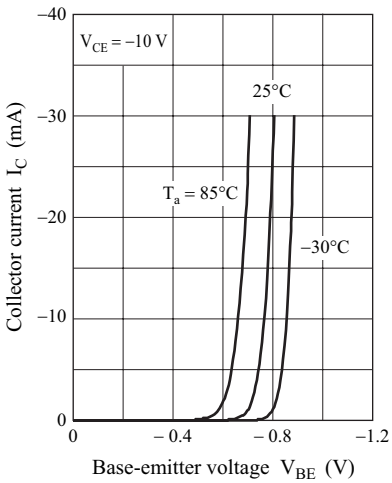
h_{FE} — I_C



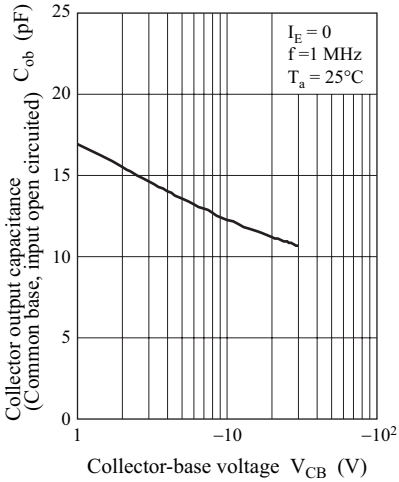
$V_{CE(sat)}$ — I_C



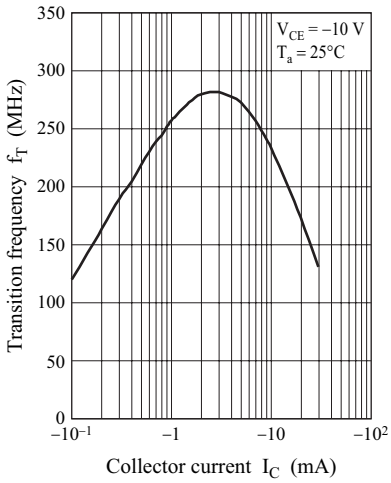
I_C — V_{BE}



C_{ob} — V_{CB}

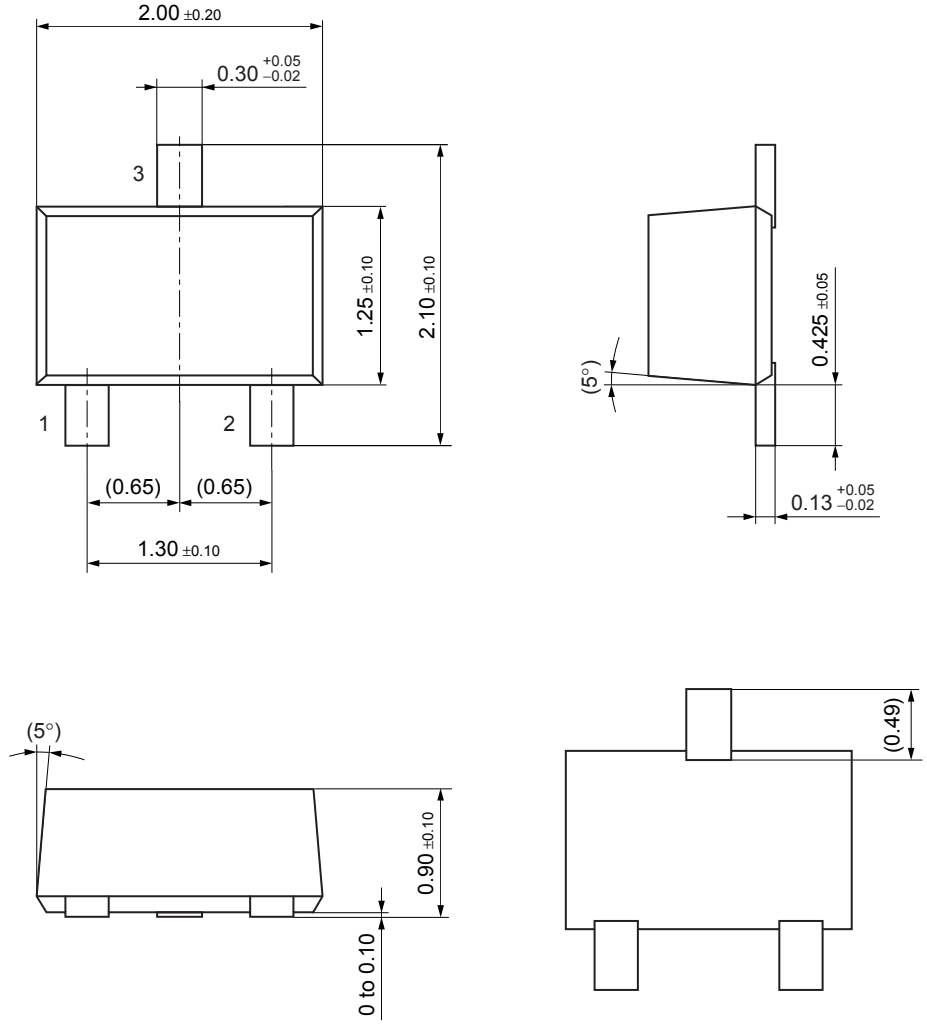


f_T — I_C



SMini3-F2-B

Unit: mm



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