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Panasonic

DSC5G03

Silicon NPN epitaxial planar type

For high-frequency amplification
DSC2G03 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: C6

■ 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}	3	V
Collector current	I_C	50	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
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 100\ \mu A$, $I_E = 0$	30			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu A$, $I_C = 0$	3			V
Base-emitter voltage	V_{BE}	$V_{CE} = 10$ V, $I_C = 2$ mA		740		mV
Forward current transfer ratio	h_{FE}	$V_{CE} = 10$ V, $I_C = 2$ mA	25		250	—
Transition frequency *1, 2	f_T	$V_{CE} = 10$ V, $I_C = 15$ mA	800		1 600	MHz
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CE} = 10$ V, $I_C = 1$ mA , f = 10.7 MHz		0.9		pF
Reverse transfer capacitance (Common base)	C_{rb}	$V_{CB} = 6$ V, $I_C = 0$, f = 1 MHz		0.7		pF
Power gain	PG	$V_{CE} = 10$ V, $I_C = 1$ mA , f = 200 MHz		20		dB

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

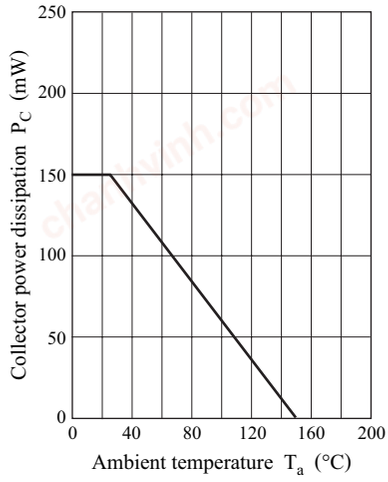
Code	T	S	0
Rank	T	S	No-rank
f_T	800 to 1 400	1 400 to 1 600	800 to 1 600
Marking Symbol	C6T	C6S	C6

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

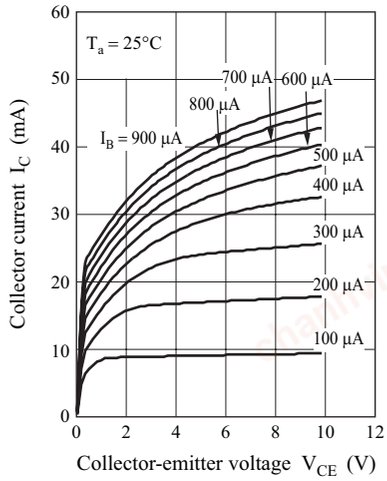
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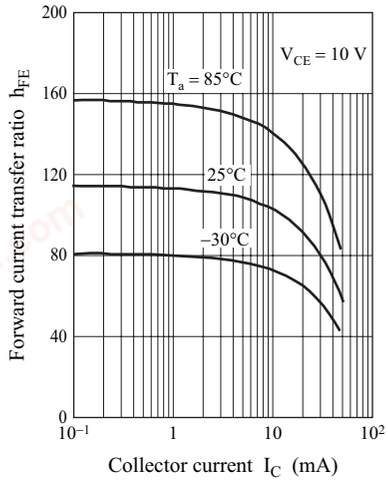
P_C — T_a



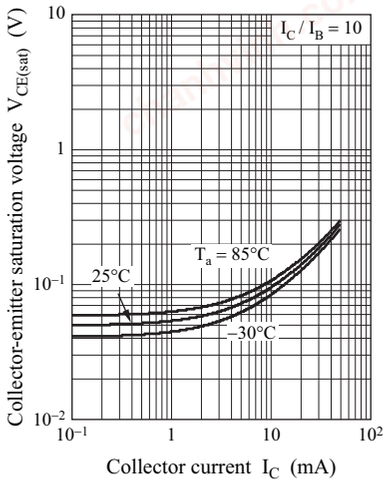
I_C — V_{CE}



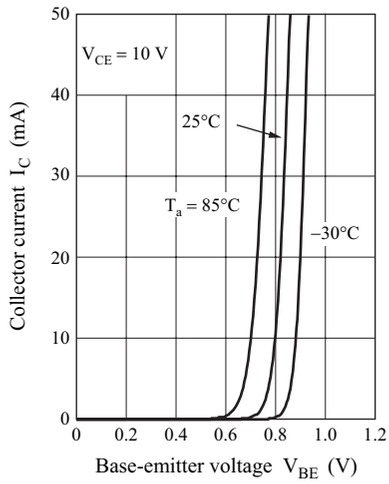
h_{FE} — I_C



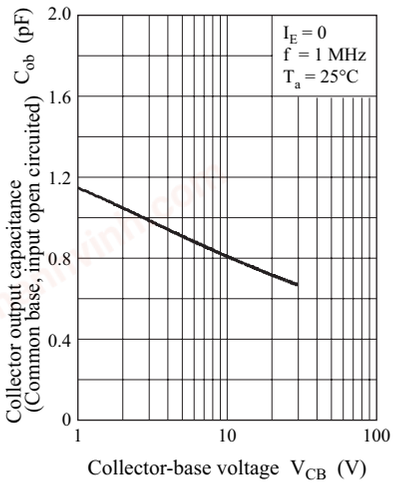
$V_{CE(sat)}$ — I_C



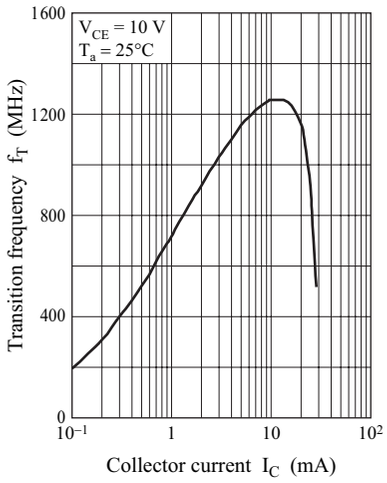
I_C — V_{BE}



C_{ob} — V_{CB}



f_T — I_C

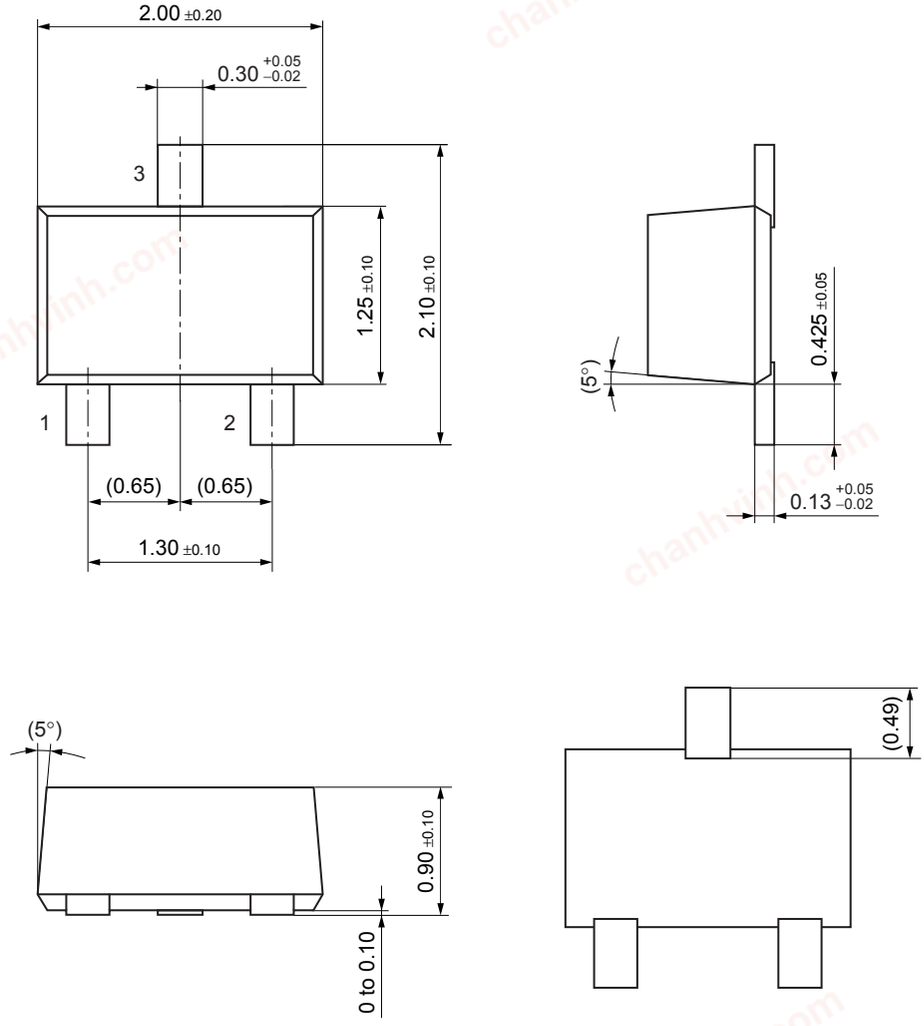


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SMini3-F2-B

Unit: mm



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