DSC7505

Silicon NPN epitaxial planar type

For low frequency output amplification
DSC8505 in MiniP3 type package

■ Features

- Contributes to miniaturization of sets, reduction of component count.
- 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: 5G

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	40	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	3	A
Peak collector current	I_{CP}	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 $T_a = 25°C \pm 3°C$

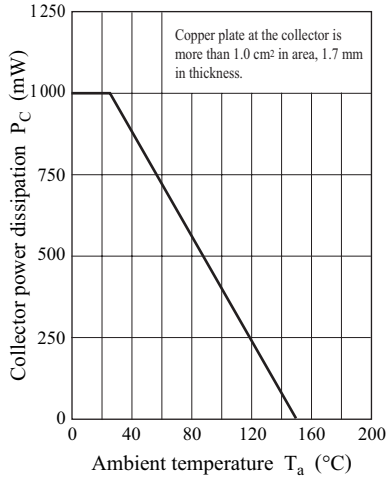
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	20			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 μA, I_C = 0	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 10 V, I_E = 0			0.1	μA
Forward current transfer ratio *1	h_{FE1} *2	V_{CE} = 2 V, I_C = 0.5 A	230		600	—
	h_{FE2}	V_{CE} = 2 V, I_C = 2 A	150			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	I_C = 3 A, I_B = 0.1 A			1.0	V
Transition frequency *1	f_T	V_{CE} = 6 V, I_C = 50 mA		200		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	V_{CB} = 20 V, I_E = 0, f = 1 MHz			50	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

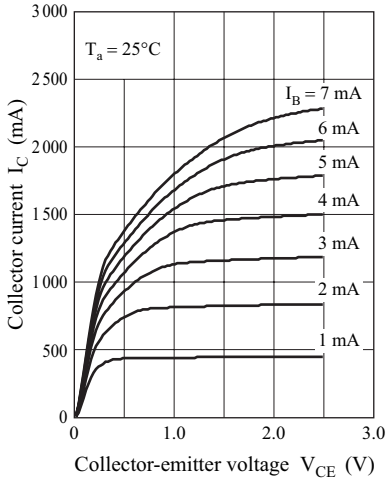
Code	Q	R	0
Rank	Q	R	No-rank
h_{FE1}	230 to 380	340 to 600	230 to 600
Marking Symbol	5GQ	5GR	5G

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

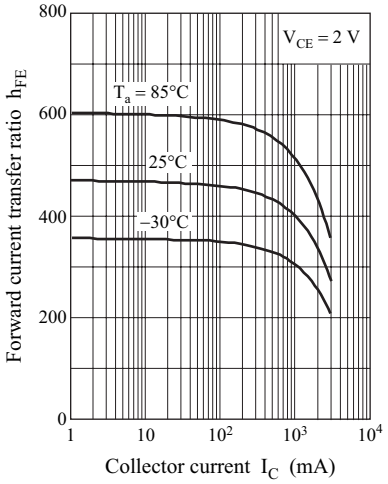
P_C — T_a



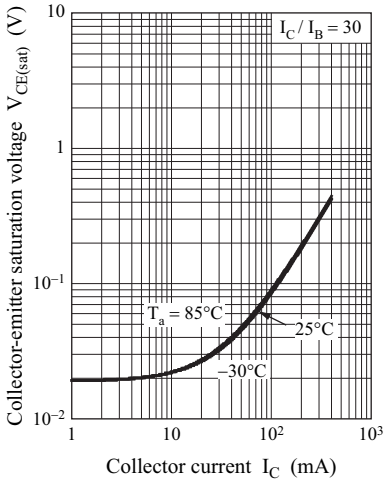
I_C — V_{CE}



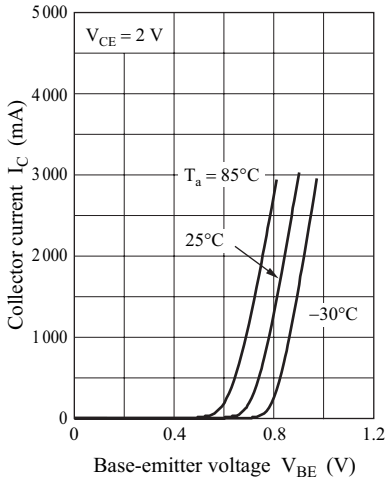
h_{FE} — I_C



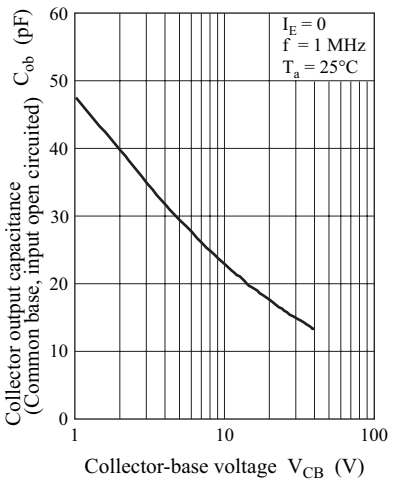
$V_{CE(sat)}$ — I_C



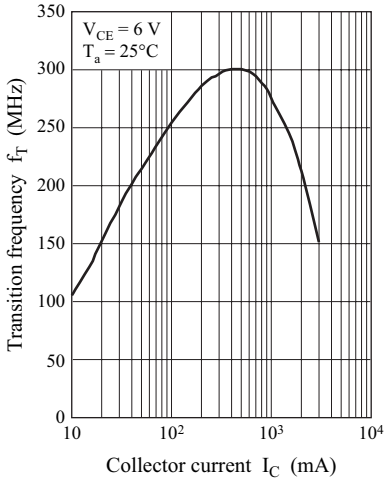
I_C — V_{BE}



C_{ob} — V_{CB}

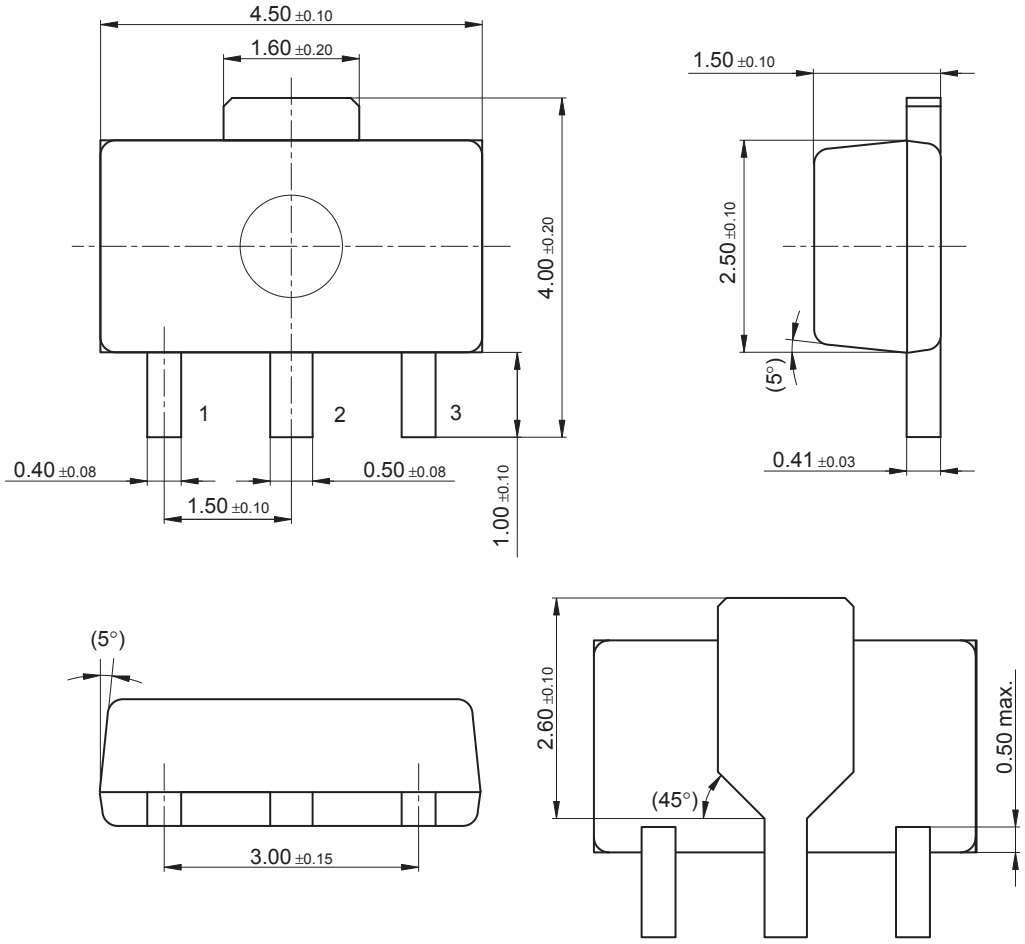


f_T — I_C



MiniP3-F2-B

Unit: mm



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