DMC206E2

Silicon NPN epitaxial planar type

For high-frequency amplification
DMC506E2 in Mini6 type package

■ Features

- High transition frequency f_T
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

Dual DSC2G02 (Individual)

■ Packaging

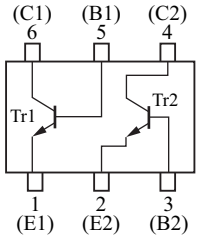
Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

■ Package

- Code
  Mini6-G4-B
- Pin Name
  1: Emitter (Tr1) 4: Collector (Tr2)
  2: Emitter (Tr2) 5: Base (Tr1)
  3: Base (Tr2) 6: Collector (Tr1)

■ Marking Symbol: D2

■ Internal Connection



■ Absolute Maximum Ratings $T_a = 25°C$

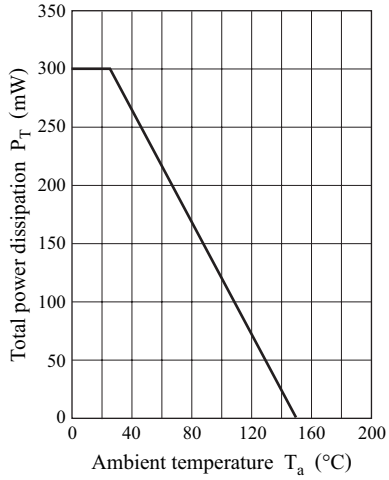
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	30	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	3	V
Collector current	I_C	15	mA
Total power dissipation	P_T	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

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

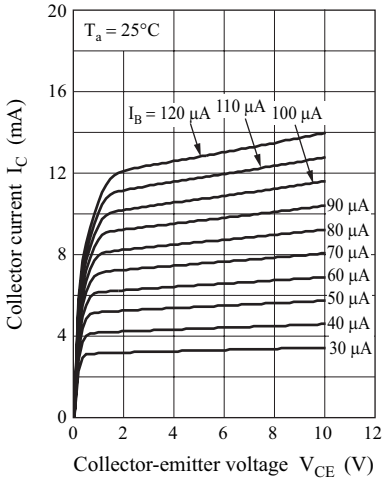
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu A$, $I_E = 0$	30			V
Collector-emitter voltage (Base open)	V_{EBO}	$I_E = 10\ \mu A$, $I_C = 0$	3			V
Base-emitter voltage	V_{BE}	$V_{CE} = 6$ V, $I_C = 1$ mA		0.72		V
Forward current transfer ratio	h_{FE}	$V_{CE} = 6$ V, $I_C = 1$ mA	65		260	—
h_{FE} ratio *	h_{FE} (Small/Large)	$V_{CE} = 6$ V, $I_C = 1$ mA	0.50	0.99		—
Transition frequency	f_T	$V_{CE} = 6$ V, $I_C = 1$ mA	450	650		MHz
Reverse transfer capacitance(Common emitter)	C_{re}	$V_{CE} = 6$ V, $I_C = 1$ mA, f = 10.7 MHz		0.6		pF
Power gain	PG	$V_{CE} = 6$ V, $I_C = 1$ mA, f = 100 MHz		24		dB
Noise figure	NF	$V_{CE} = 6$ V, $I_C = 1$ mA, f = 100 MHz		3.3		dB

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

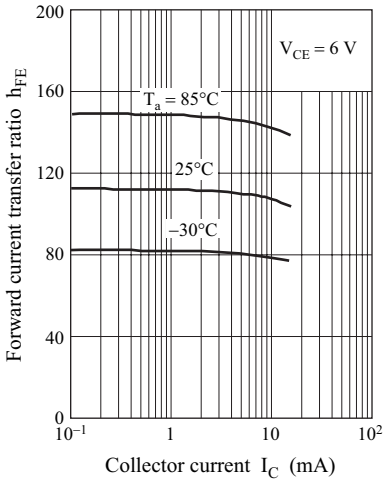
P_T — T_a



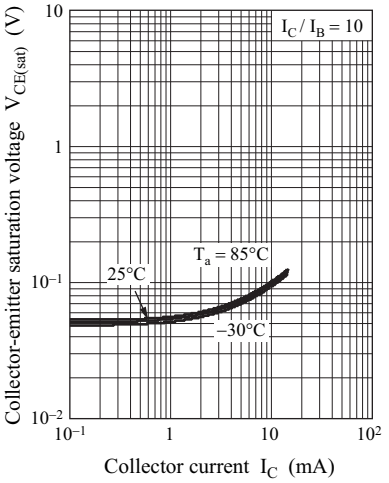
I_C — V_{CE}



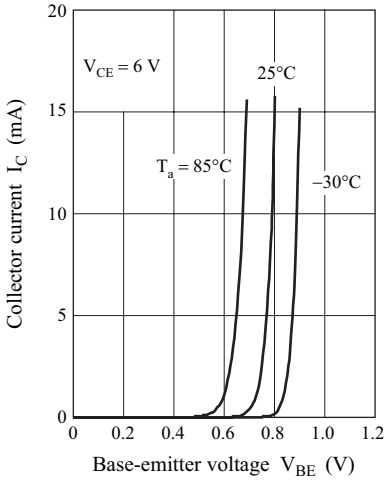
h_{FE} — I_C



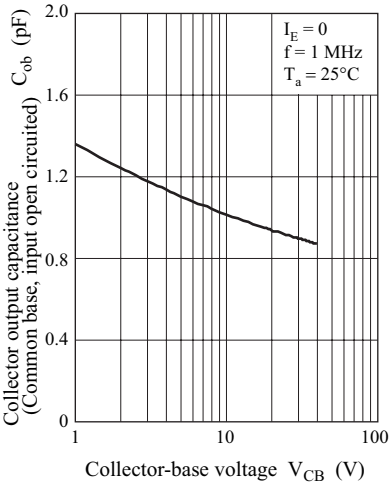
$V_{CE(sat)}$ — I_C



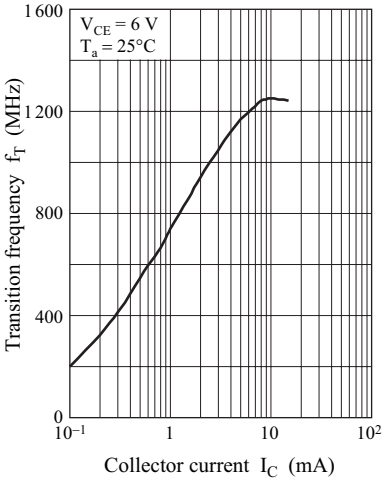
I_C — V_{BE}



C_{ob} — V_{CB}

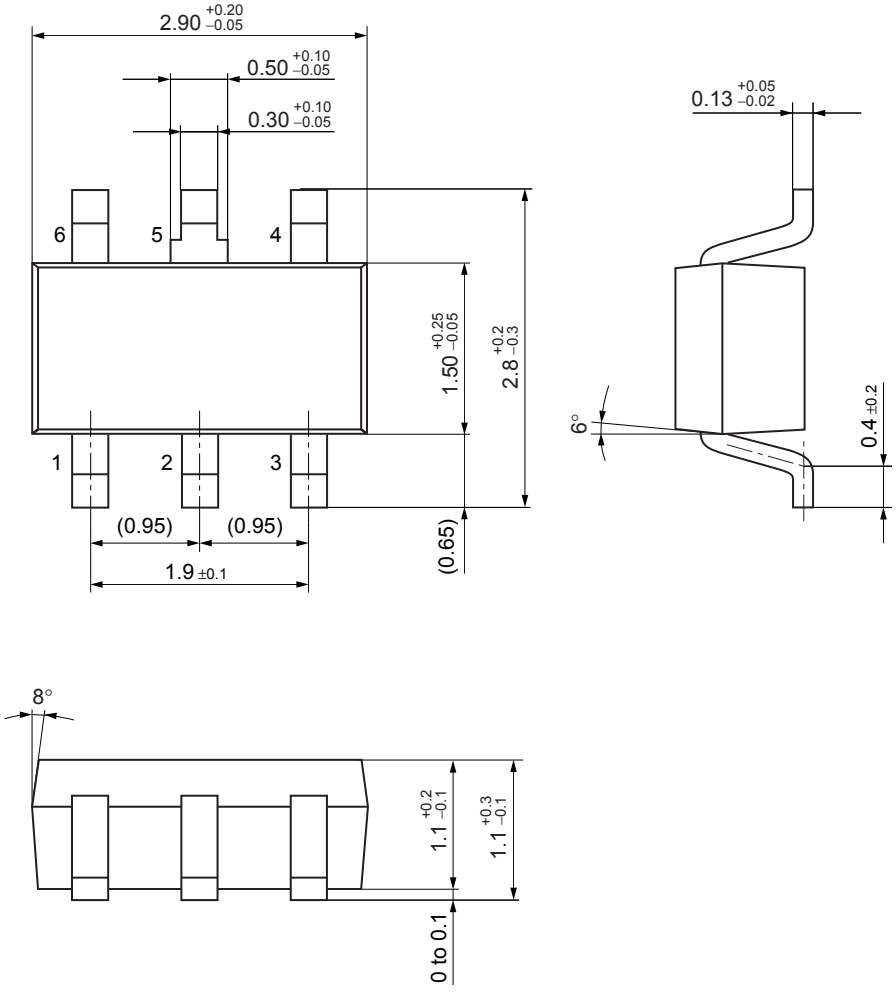


f_T — I_C



Mini6-G4-B

Unit: mm



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