DMC206E2

Silicon NPN epitaxial planar type

For high-frequency amplification
DMC506E2 in Mini6 type package

■ Features

- High transition frequency f_T
- Halogen-free / RoHS compliant
  (EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

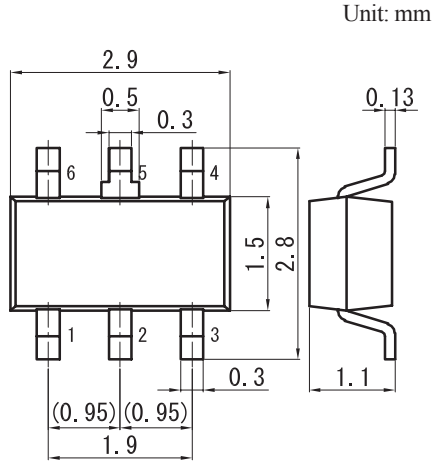
■ Marking Symbol: D2

■ Basic Part Number

Dual DSC2G02 (Individual)

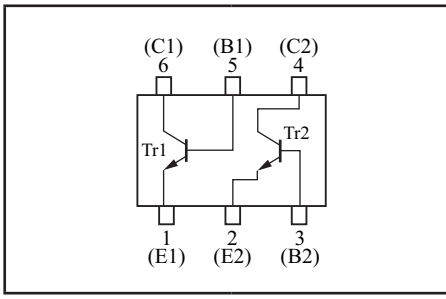
■ Packaging

DMC206E20R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)



1: Emitter (Tr1)
2: Emitter (Tr2)
3: Base (Tr2)
4: Collector (Tr2)
5: Base (Tr1)
6: Collector (Tr1)

Panasonic	Mini6-G4-B
JEITA	SC-74
Code	SOT-457



■ Absolute Maximum Ratings $T_a = 25°C$

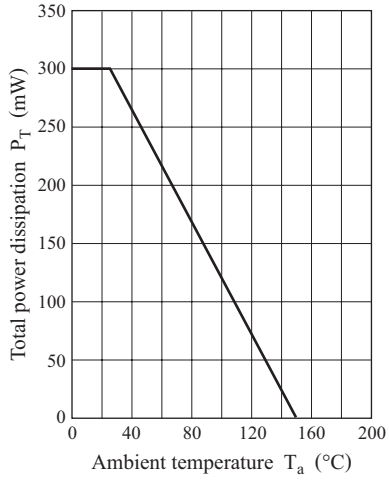
Parameter		Symbol	Rating	Unit
Tr1 Tr2	Collector-base voltage (Emitter open)	V_{CBO}	30	V
	Collector-emitter voltage (Base open)	V_{CEO}	20	V
	Emitter-base voltage (Collector open)	V_{EBO}	3	V
	Collector current	I_C	15	mA
Overall	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	°C
	Operating ambient temperature	T_{opr}	–40 to +85	°C
	Storage temperature	T_{stg}	–55 to +150	°C

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

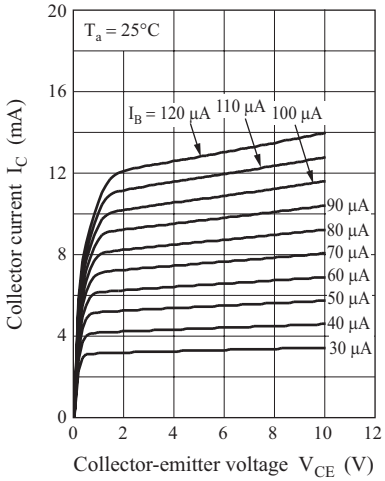
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu A$, $I_E = 0$	30			V
Collector-emitter voltage (Base open)	V_{EBO}	$I_E = 10\ \mu A$, $I_C = 0$	3			V
Base-emitter voltage	V_{BE}	$V_{CE} = 6$ V, $I_C = 1$ mA		0.72		V
Forward current transfer ratio	h_{FE}	$V_{CE} = 6$ V, $I_C = 1$ mA	65		260	—
h_{FE} ratio *1	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. *1: Ratio between 2 elements

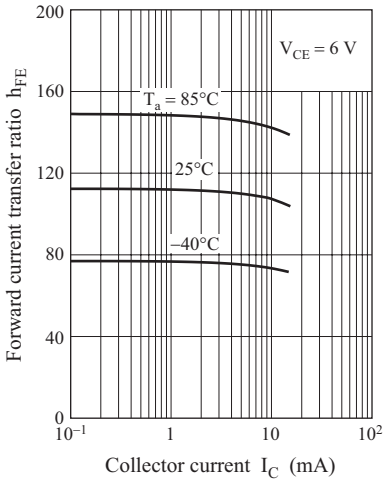
P_T — T_a



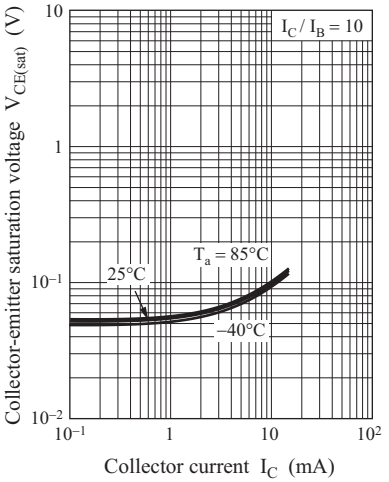
I_C — V_{CE}



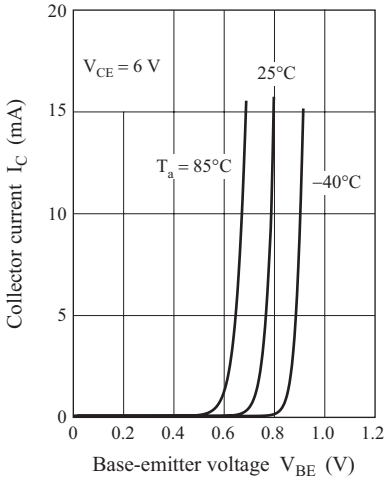
h_{FE} — I_C



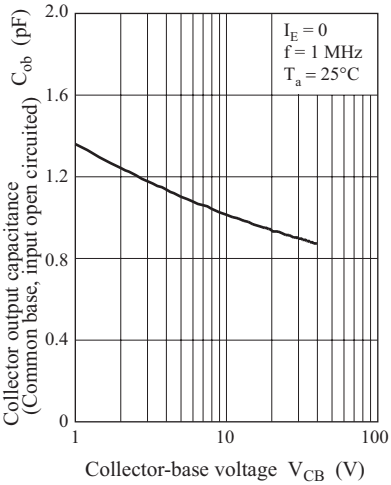
$V_{CE(sat)}$ — I_C



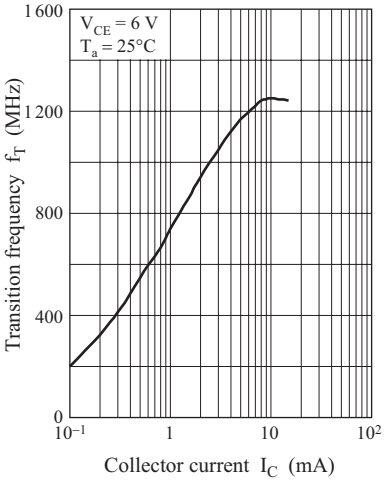
I_C — V_{BE}



C_{ob} — V_{CB}

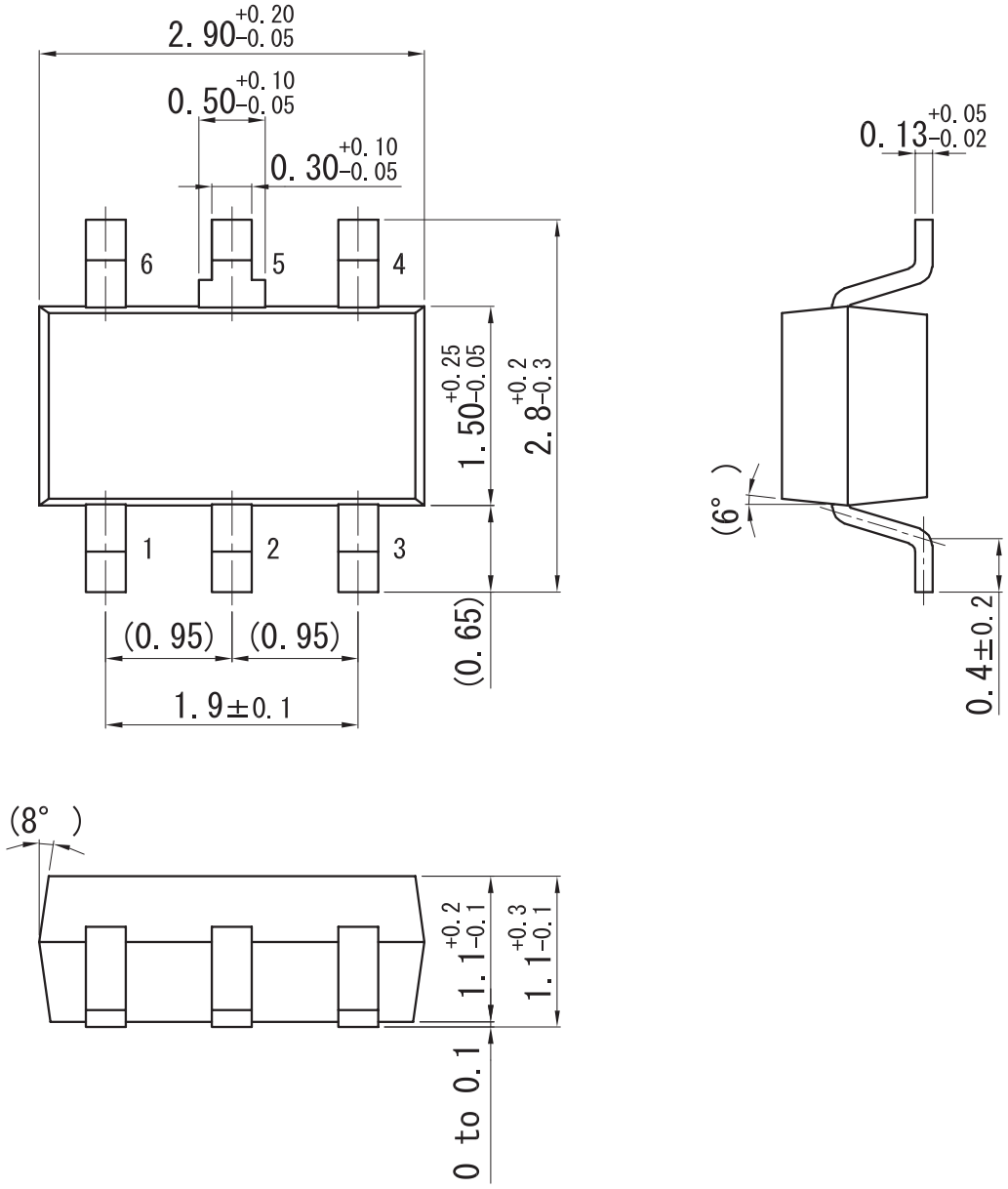


f_T — I_C

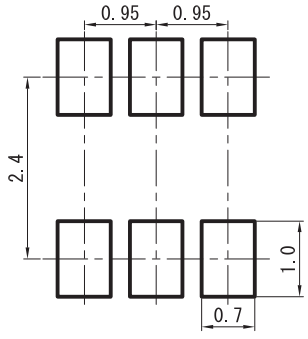


Mini6-G4-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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