

DMC506E2

Silicon NPN epitaxial planar type

For high-frequency amplification
DMC206E2 in SMini6 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

DMC506E20R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

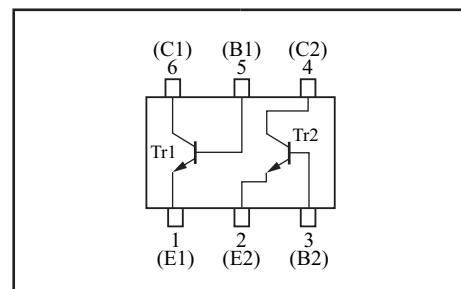
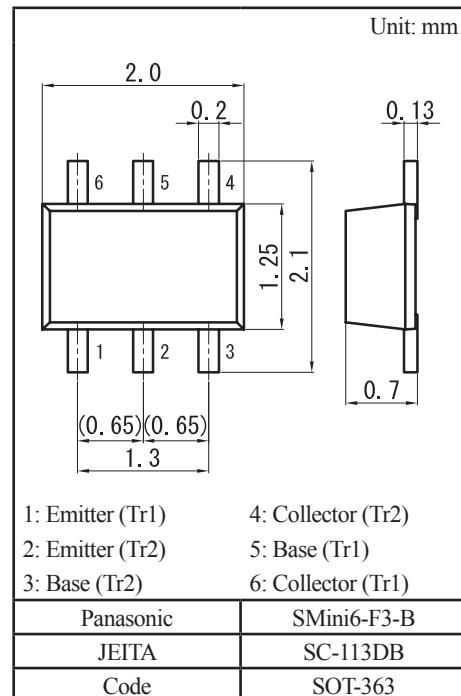
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

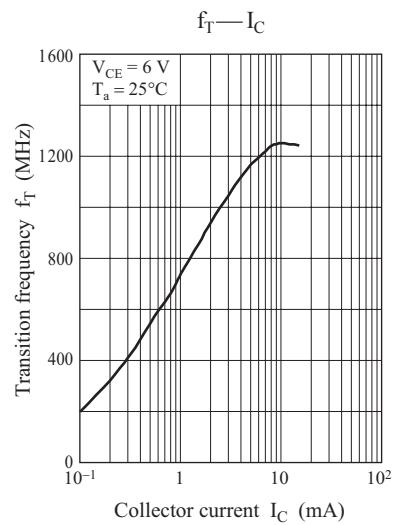
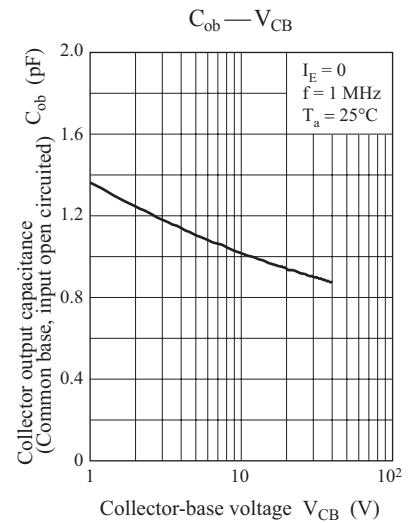
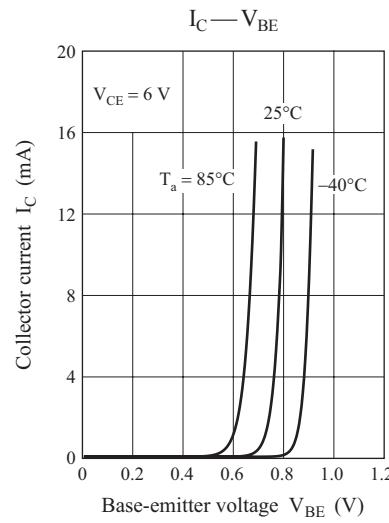
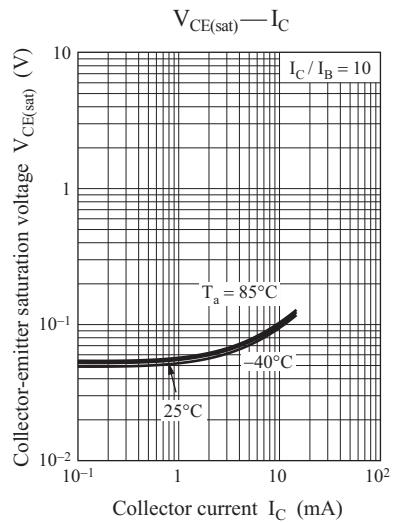
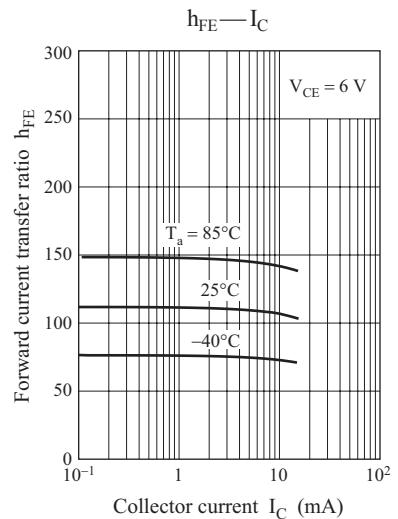
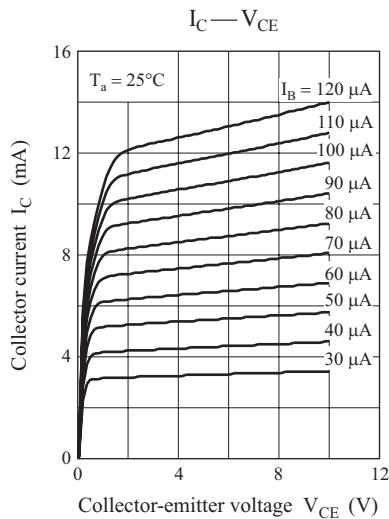
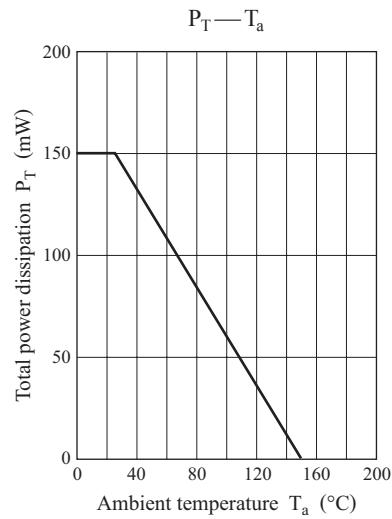
Parameter		Symbol	Rating	Unit
Tr1	Collector-base voltage (Emitter open)	V_{CBO}	30	V
	Collector-emitter voltage (Base open)	V_{CEO}	20	V
Tr2	Emitter-base voltage (Collector open)	V_{EBO}	3	V
	Collector current	I_C	15	mA
Overall	Total power dissipation	P_T	150	mW
	Junction temperature	T_j	150	°C
	Operating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

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

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

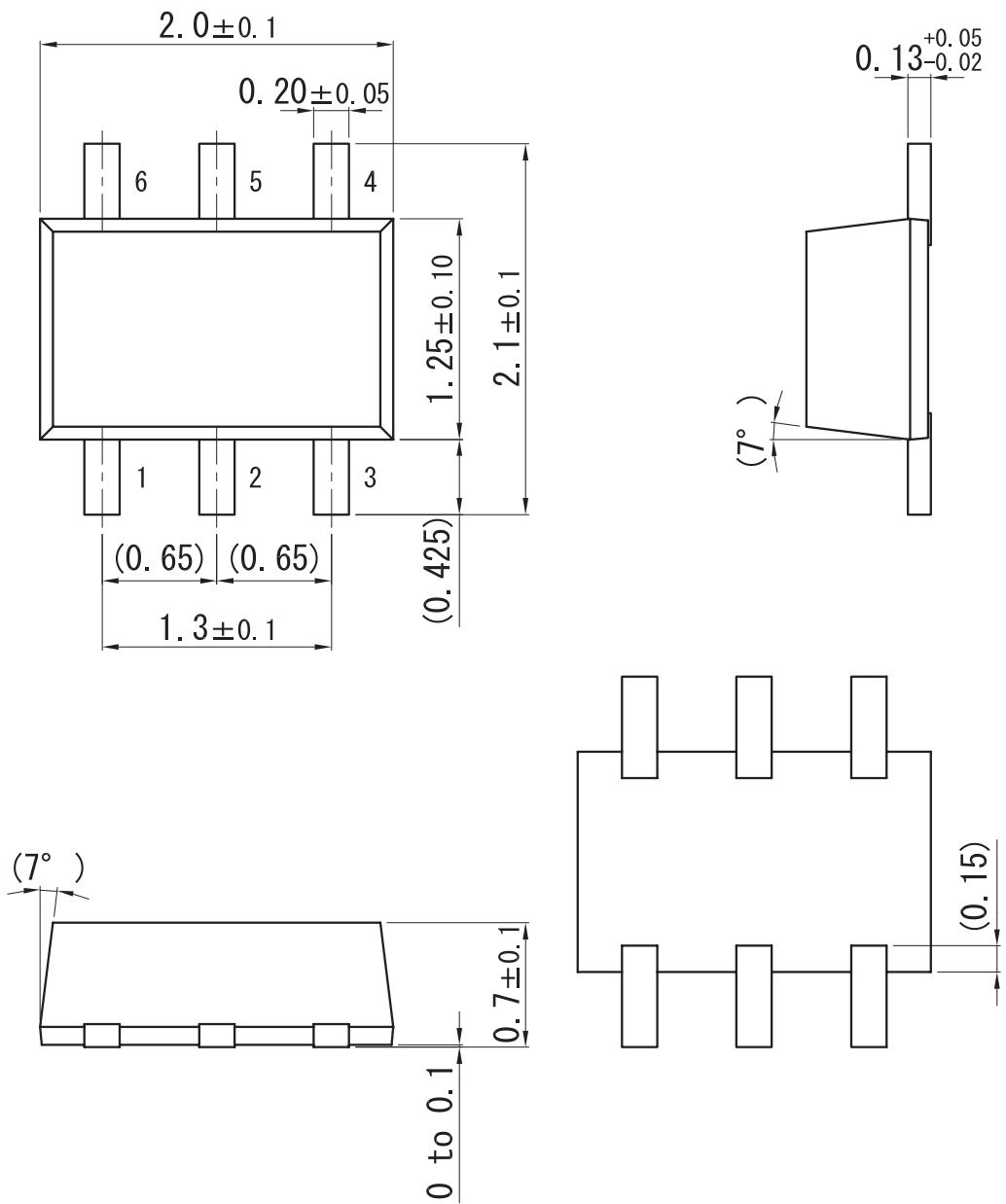
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



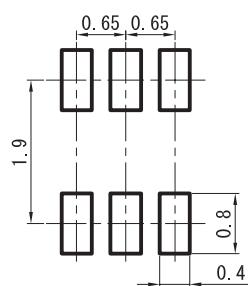


SMini6-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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