

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)

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

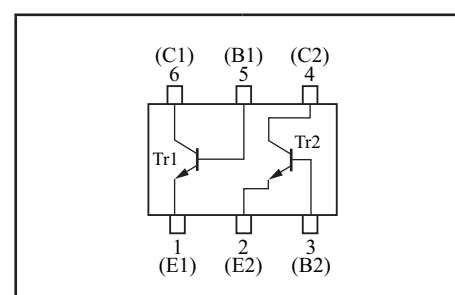
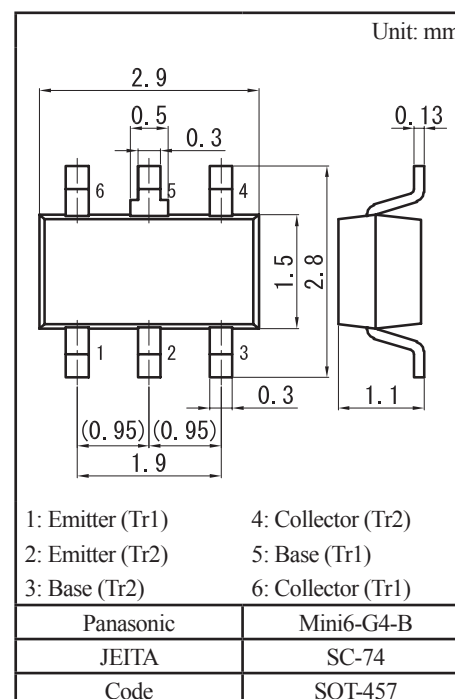
Parameter		Symbol	Rating	Unit
Tr1 Tr2	Collector-base voltage (Emitter open)	V_{CBO}	30	V
	Collector-emitter voltage (Base open)	V_{CEO}	20	V
	Emitter-base voltage (Collector open)	V_{EBO}	3	V
	Collector current	I_C	15	mA
Overall	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	$^\circ\text{C}$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

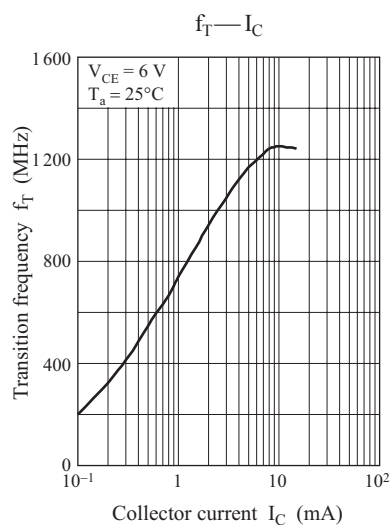
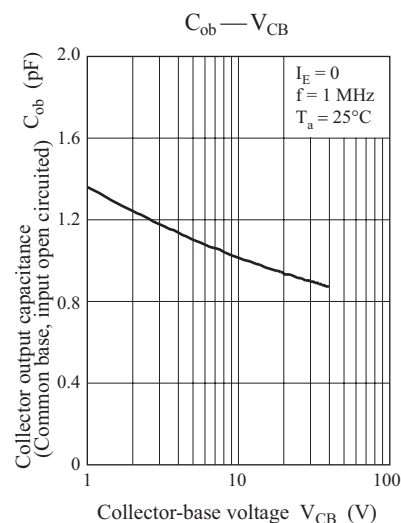
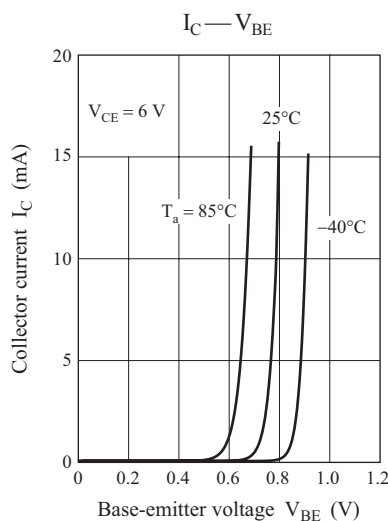
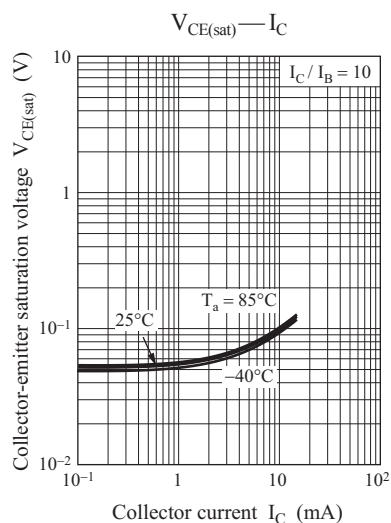
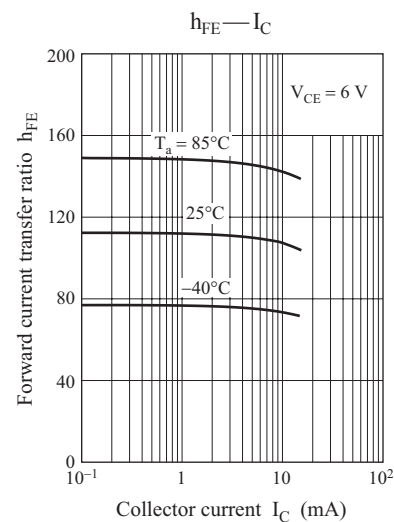
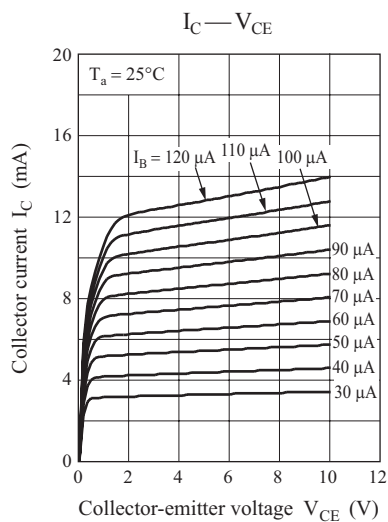
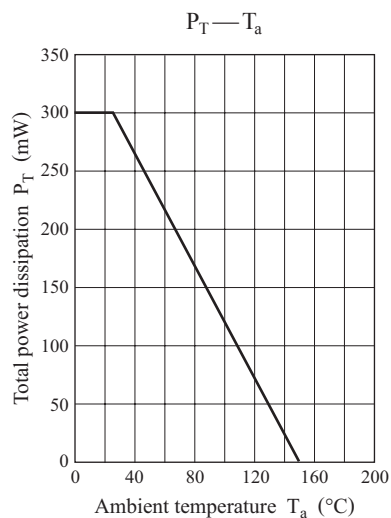
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

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	—
h_{FE} ratio *1	h_{FE} (Small/Large)	$V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$	0.50	0.99		—
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) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *1: Ratio between 2 elements





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