

# DMC506E2

## Silicon NPN epitaxial planar type

For high-frequency amplification  
DMC206E2 in SMini6 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

DMC506E20R Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

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

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	$P_T$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
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	—
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.

### ■ Package

#### • Code

SMini6-F3-B

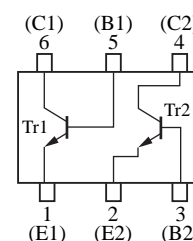
Package dimension clicks here.→

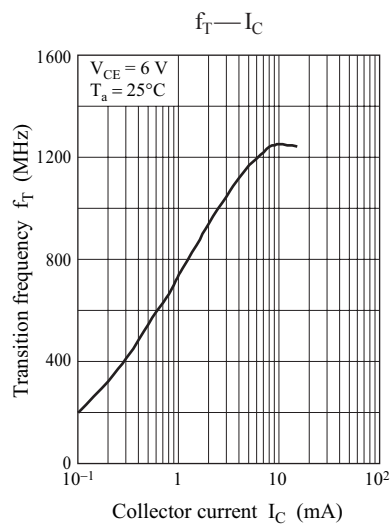
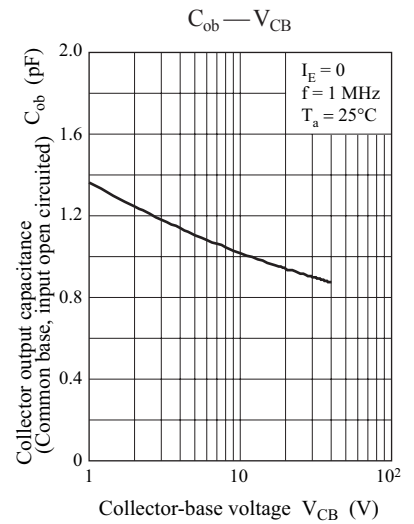
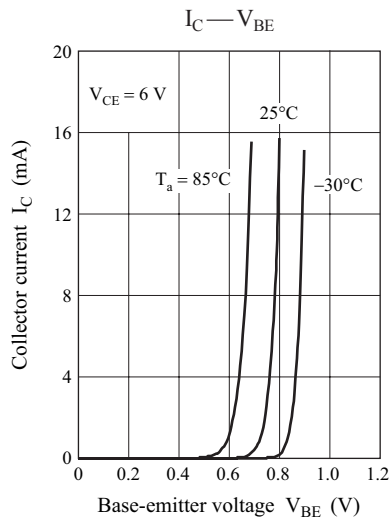
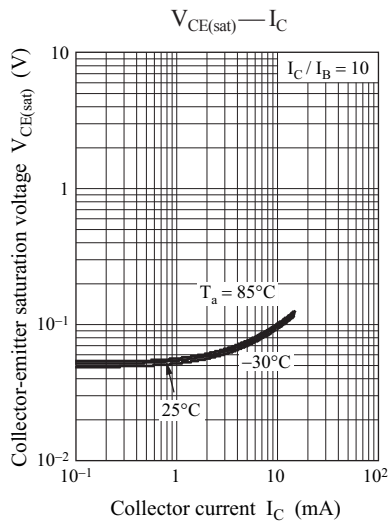
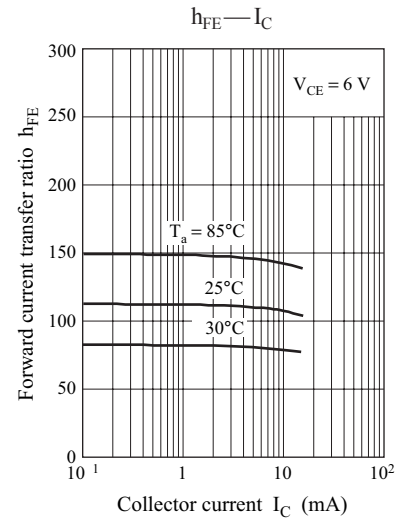
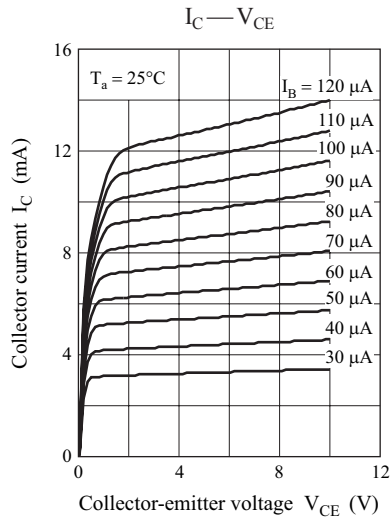
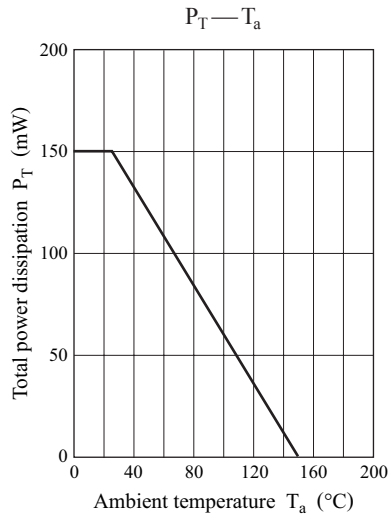
#### • Pin Name

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

### ■ Marking Symbol: D2

### ■ Internal Connection





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