

DMC50101

Silicon NPN epitaxial planar type

For general amplification

DMC20101 in SMini5 type package

■ Features

- High forward current transfer ratio h_{FE} with excellent linearity
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

Dual DSC2001 (Common emitter)

■ Packaging

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}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	200	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}	$I_C = 10 \mu\text{A}, I_E = 0$	60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{mA}, I_B = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20 \text{V}, I_E = 0$			0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10 \text{V}, I_B = 0$			100	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10 \text{V}, I_C = 2 \text{mA}$	210		460	—
h_{FE} ratio *	h_{FE} (Small/Large)	$V_{CE} = 10 \text{V}, I_C = 2 \text{mA}$	0.50	0.99		—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{mA}, I_B = 10 \text{mA}$		0.13	0.3	V
Transition frequency	f_T	$V_{CE} = 10 \text{V}, I_C = 2 \text{mA}$		150		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10 \text{V}, I_E = 0, f = 1 \text{MHz}$		1.5		pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Ratio between 2 elements

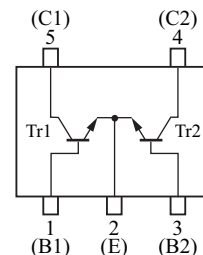
■ Package

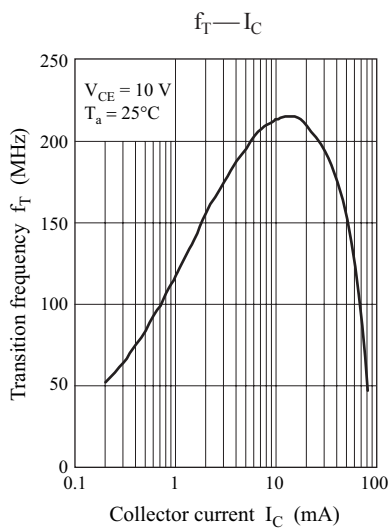
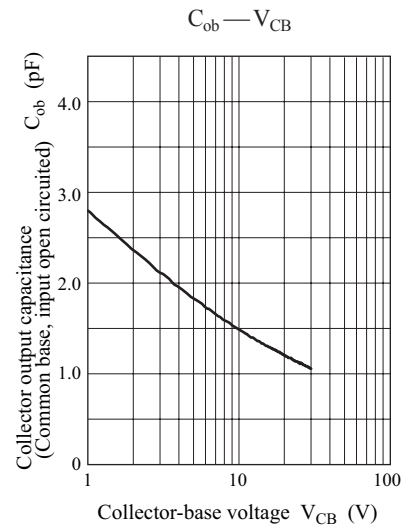
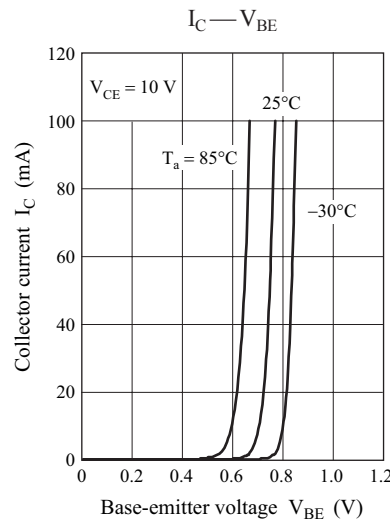
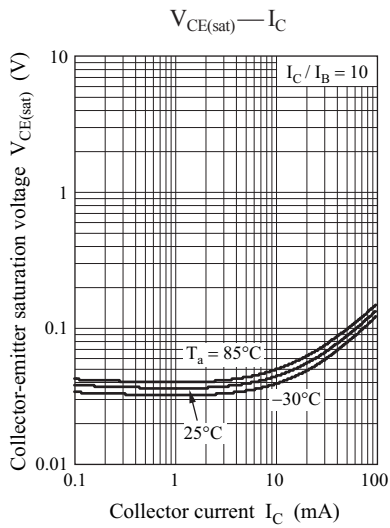
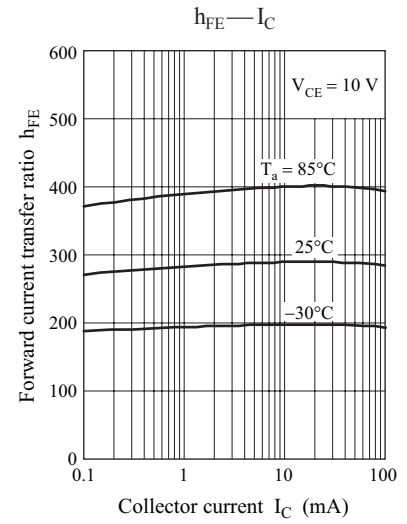
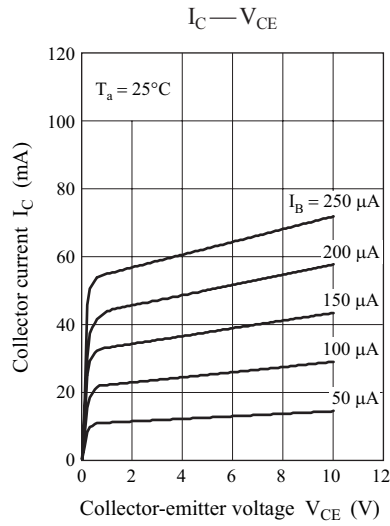
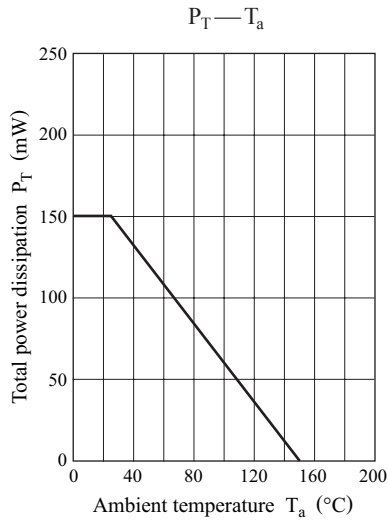
- Code
SMini5-F3-B
- Pin Name

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

■ Marking Symbol: A1

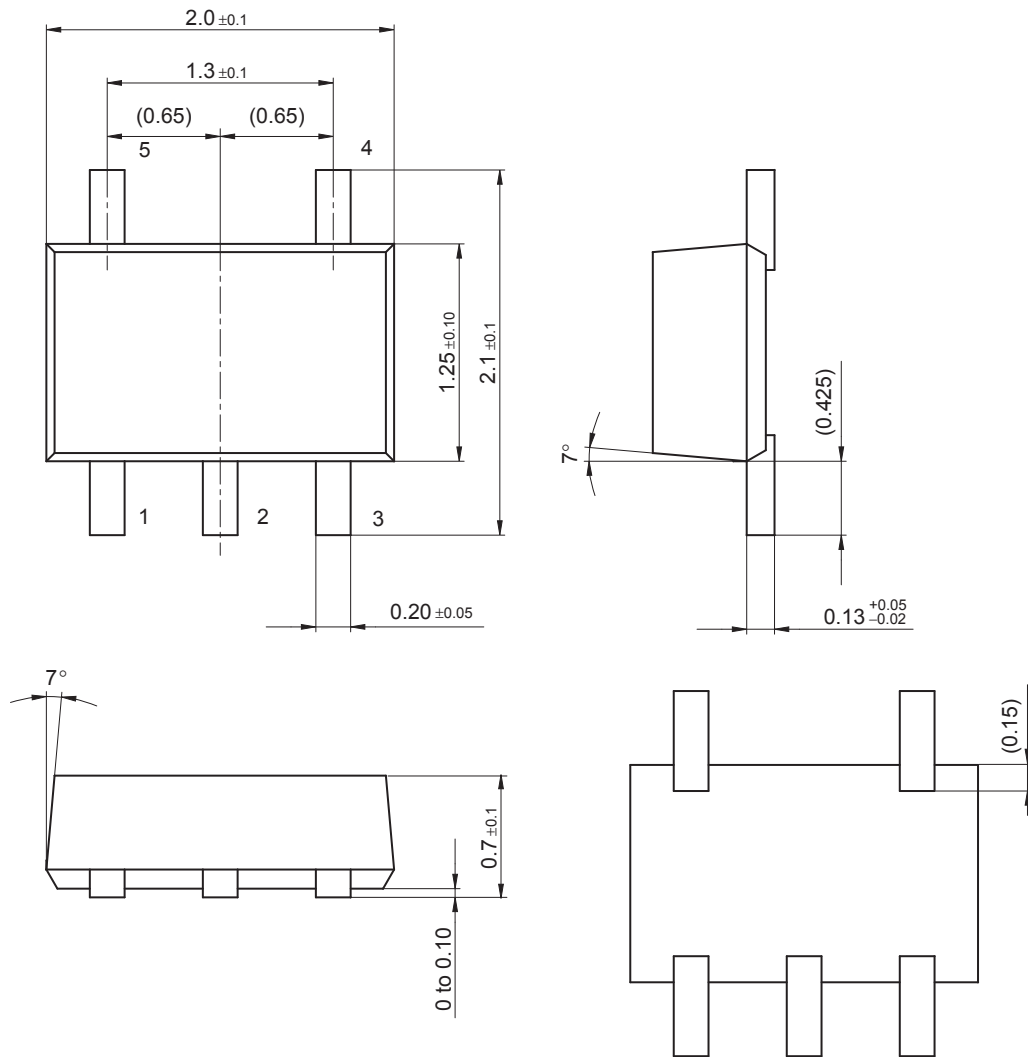
■ Internal Connection





SMini5-F3-B

Unit: mm



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