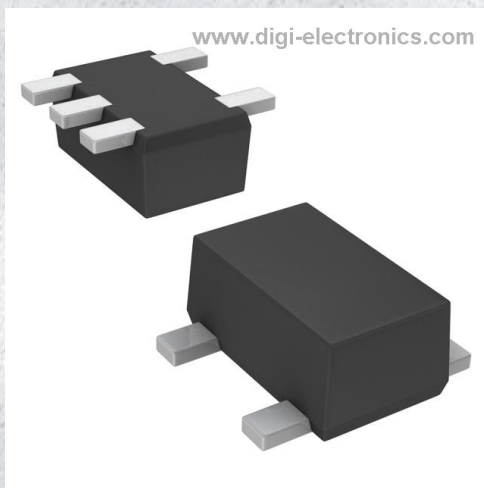


# DMC502010R Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	DMC502010R-DG
Manufacturer	<a href="#">Panasonic Electronic Components</a>
Manufacturer Product Number	DMC502010R
Description	TRANSISTOR NPN 50V SMini5-F3-B
Detailed Description	Transistor General Amplification 2 NPN (Dual) Common Base 50V 100mA Surface Mount SMini5-F3-B



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

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## Purchase and inquiry

Manufacturer Product Number:

DMC502010R

Series:

-

Transistor Type:

2 NPN (Dual) Common Base

Voltage - Rated:

50V

Mounting Type:

Surface Mount

Supplier Device Package:

SMini5-F3-B

Manufacturer:

Panasonic Electronic Components

Product Status:

Discontinued at Digi-Key

Applications:

General Amplification

Current Rating (Amps):

100mA

Package / Case:

6-SMD (5 Leads), Flat Lead

Base Product Number:

DMC50201

## Environmental & Export classification

RoHS Status:

RoHS Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8541.21.0095

# DMC50201

## Silicon NPN epitaxial planar type

For general amplification  
DMC50201 in SMini5 type package

### ■ Features

- High forward current transfer ratio  $h_{FE}$  with excellent linearity
- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Halogen-free / RoHS compliant  
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

### ■ Marking Symbol: A6

### ■ Basic Part Number

Dual DSC2001 (Common base)

### ■ Packaging

DMC502010R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

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

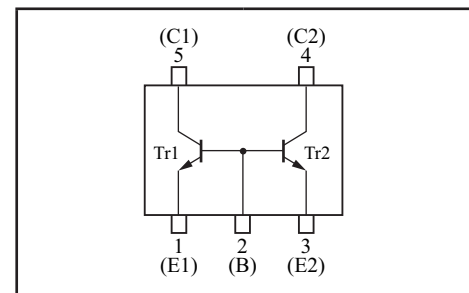
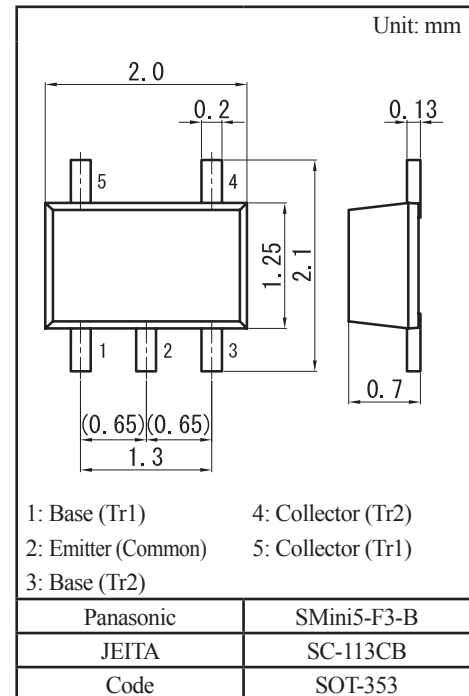
Parameter		Symbol	Rating	Unit
Tr1 Tr2	Collector-base voltage (Emitter open)	$V_{CBO}$	60	V
	Collector-emitter voltage (Base open)	$V_{CEO}$	50	V
	Emitter-base voltage (Collector open)	$V_{EBO}$	7	V
	Collector current	$I_C$	100	mA
	Peak collector current	$I_{CP}$	200	mA
Overall	Total power dissipation	$P_T$	150	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	$^\circ\text{C}$

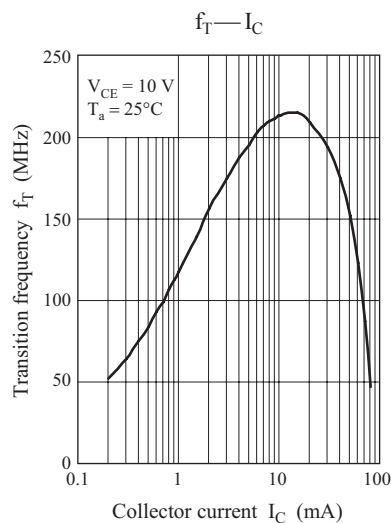
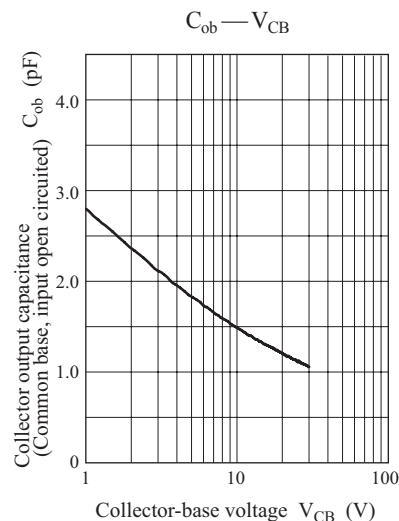
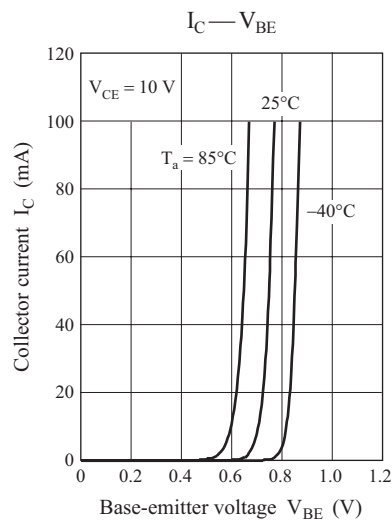
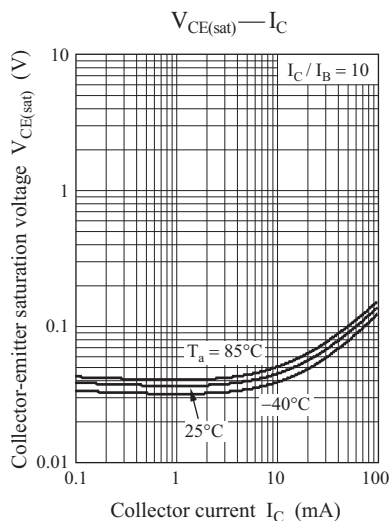
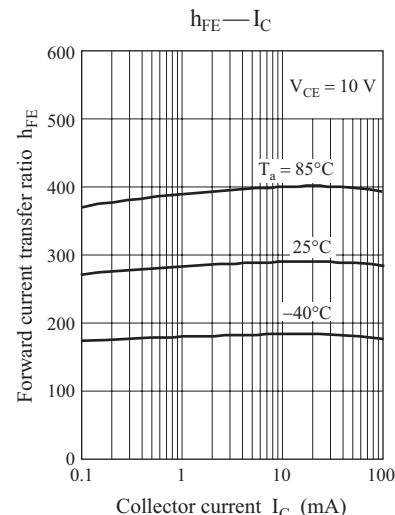
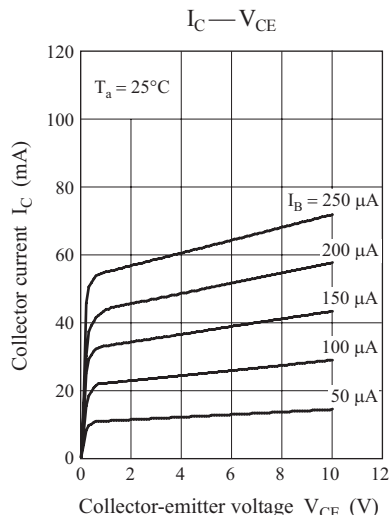
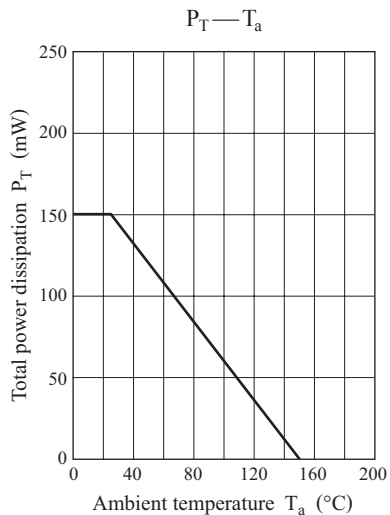
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 10 \mu\text{A}, I_E = 0$	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	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 10 \text{ V}, I_B = 0$			100	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$	210		460	—
$h_{FE}$ ratio *1	$h_{FE}$ (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.

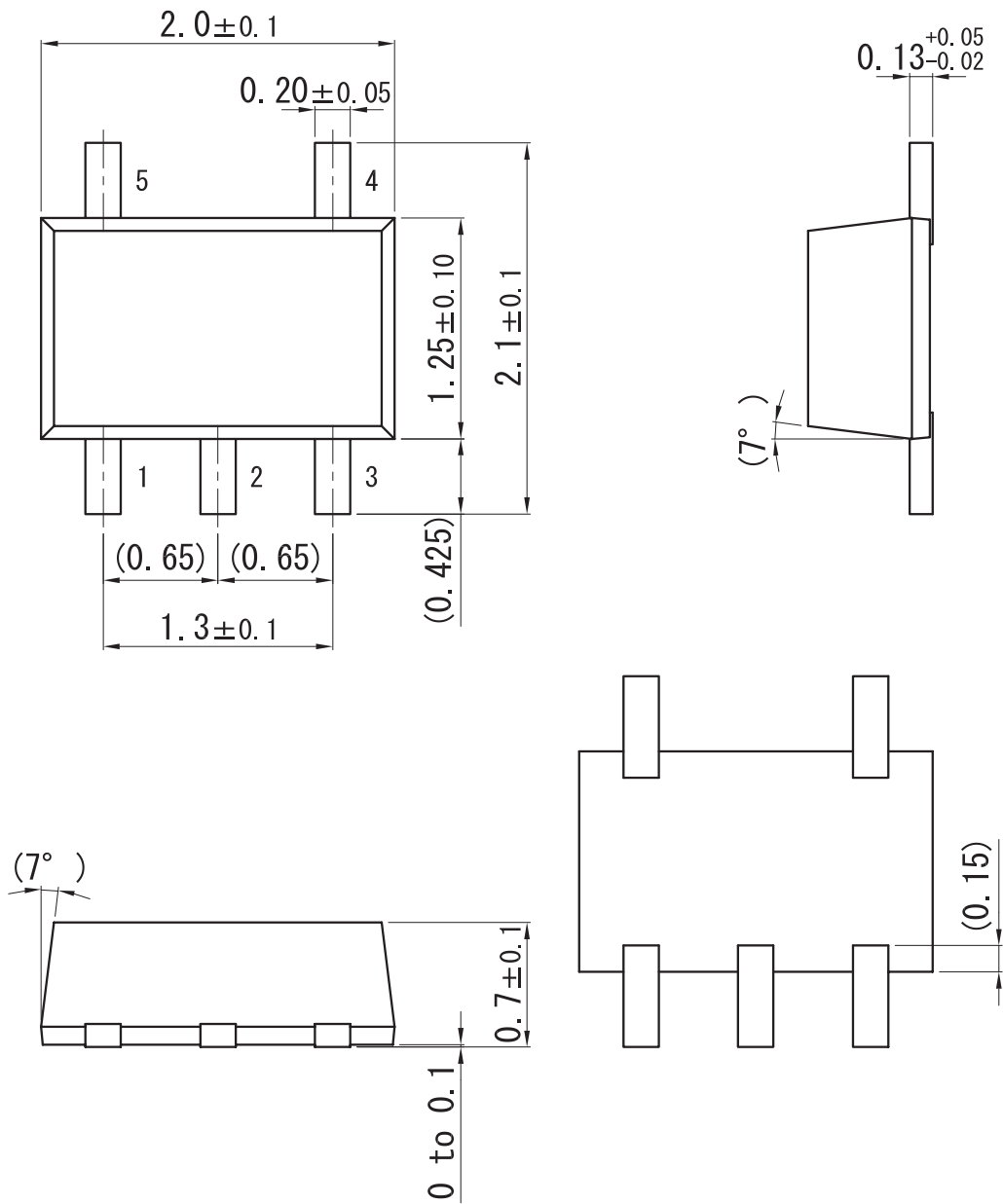
2. \*1: Ratio between 2 elements



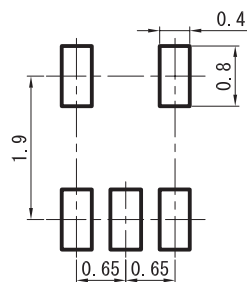


## SMini5-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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