

# RT2P05M

Composite Transistor With Resistor  
For Switching Application  
Silicon PNP Epitaxial Type

## DESCRIPTION

RT2P05M is composite transistor with built-in bias resistor.

## FEATURE

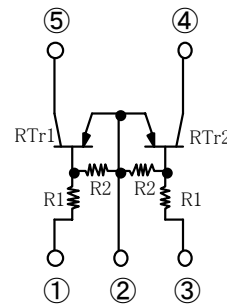
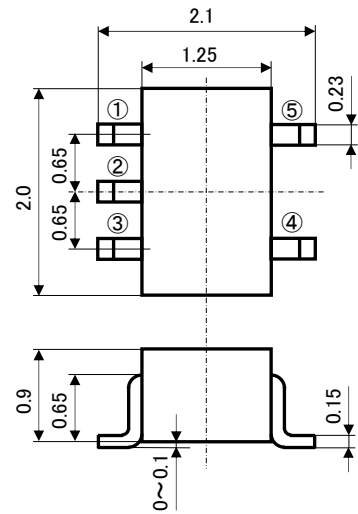
Built-in bias resistor ( $R_1=47k\Omega$ ,  $R_2=47k\Omega$ )  
Mini package for easy mounting

## APPLICATION

Inverted circuit, Switching circuit,  
Interface circuit, Driver circuit

## OUTLINE DRAWING

Unit: mm



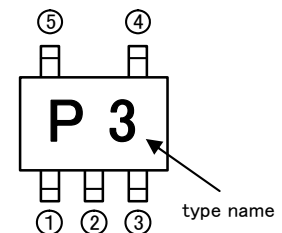
TERMINAL CONNECTOR  
①: BASE1  
②: EMITTER (COMMON)  
③: BASE2  
④: COLLECTOR2  
⑤: COLLECTOR1

JEITA: SC-88A  
JEDEC: —

## MAXIMUM RATING ( $T_a=25^\circ\text{C}$ ) (RTTr1, RTTr2 COMMON)

SYMBOL	PARAMETER	RATING	UNIT
VCBO	Collector to Base voltage	-50	V
VEBO	Emitter to Base voltage	-10	V
VCEO	Collector to Emitter voltage	-50	V
V <sub>IN</sub>	Input voltage	-40	V
I <sub>C</sub>	Collector current	-100	mA
I <sub>CM</sub>	Peak Collector current	-200	mA
P <sub>T</sub>	Total dissipation	200	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

## MARKING



## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ ) (RTTr1, RTTr2 COMMON)

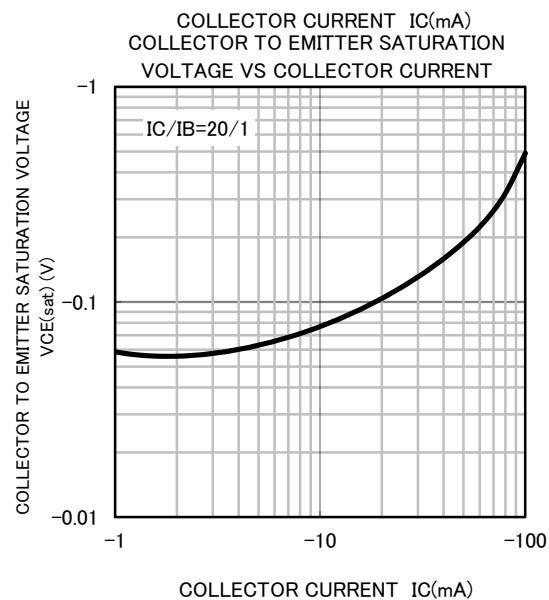
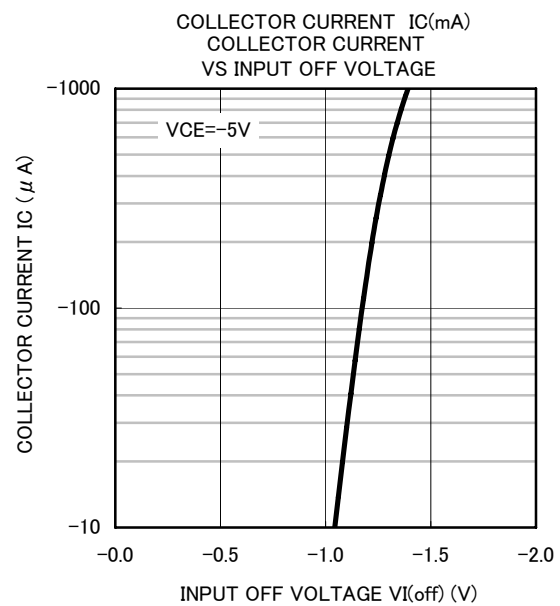
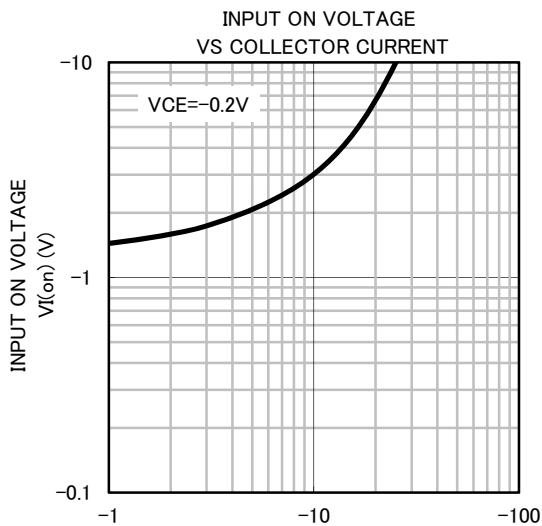
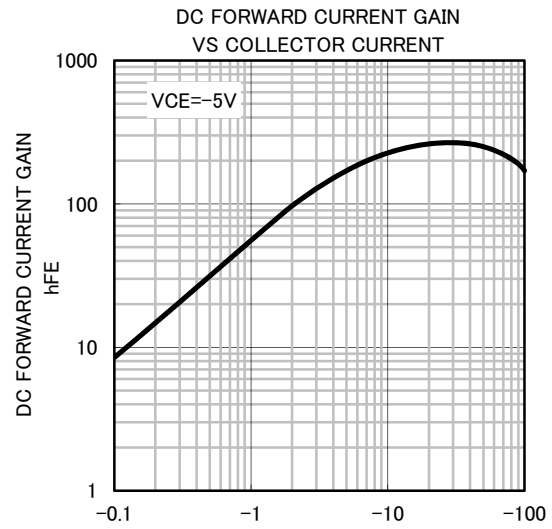
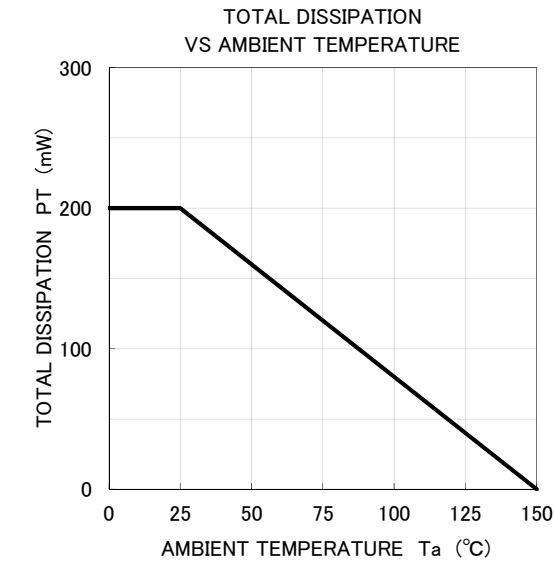
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
V <sub>(BR)CEO</sub>	Collector to Emitter breakdown voltage	I <sub>C</sub> =-100 μA, R <sub>BE</sub> =∞	-50	—	—	V
I <sub>CBO</sub>	Collector cut off current	V <sub>CB</sub> =-50V, I <sub>E</sub> =0	—	—	-0.1	μA
I <sub>EBO</sub>	Emitter cut off current	V <sub>EB</sub> =-5V, I <sub>C</sub> =0	-41	-53	-76	μA
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =-5V, I <sub>C</sub> =-5mA	50	—	—	—
V <sub>CE(sat)</sub>	Collector to Emitter saturation voltage	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA	—	-0.1	-0.3	V
V <sub>I(ON)</sub>	Input on voltage	V <sub>CE</sub> =-0.2V, I <sub>C</sub> =-5mA	—	-2.2	-5.0	V
V <sub>I(OFF)</sub>	Input off voltage	V <sub>CE</sub> =-5V, I <sub>C</sub> =-100 μA	-0.8	-1.1	—	V
R <sub>1</sub>	Input resistor	—	33	47	61	kΩ
R <sub>2</sub> /R <sub>1</sub>	Resistor ratio	—	0.9	1.0	1.1	—
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =-6V, I <sub>E</sub> =10mA	—	150	—	MHz

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## TYPICAL CHARACTERISTICS

( $T_a=25^\circ\text{C}$ )( $R_{Tr1}, R_{Tr2}$  COMMON)





**Keep safety first in your circuit designs!**

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