

# RT3T11M

Composite Transistor With Resistor  
For Switching Application  
Silicon Epitaxial Type

## DESCRIPTION

RT3T11M is composite transistor built with RT1N141 chip and RT1P141 chip in SC-88 package.

## FEATURE

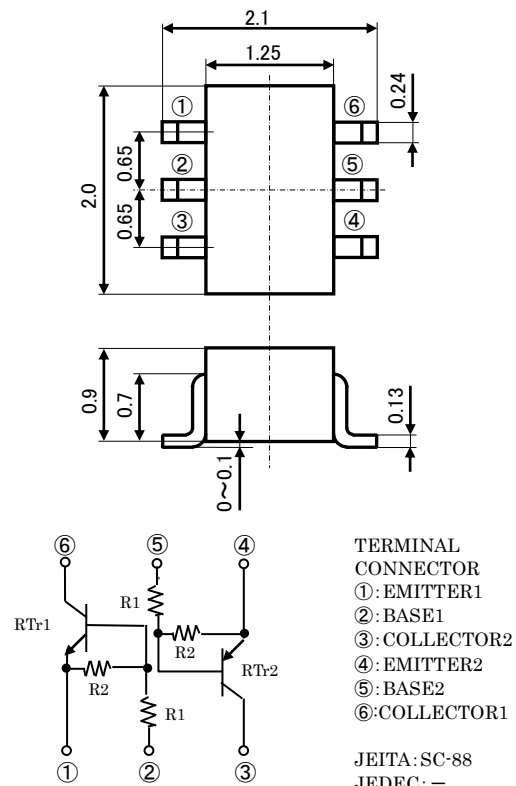
- Silicon epitaxial type
- Each transistor elements are independent.
- Mini package for easy mounting

## APPLICATION

- Inverted circuit, Switching circuit,
- Interface circuit, Driver circuit

## OUTLINE DRAWING

Unit:mm

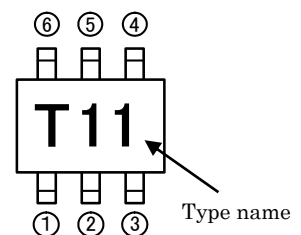


## MAXIMUM RATING (Ta=25°C) (RTr1\_NPN, RTr2\_PNP)

SYMBOL	PARAMETER	RATING	UNIT
V <sub>CB0</sub>	Collector to Base voltage	50	V
V <sub>EB0</sub>	Emitter to Base voltage	10	V
V <sub>CEO</sub>	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

※PNP built in transistor of "—" sign is abbreviation.

## MARKING



## ELECTRICAL CHARACTERISTICS (Ta=25°C) (RTr1\_NPN, RTr2\_PNP)

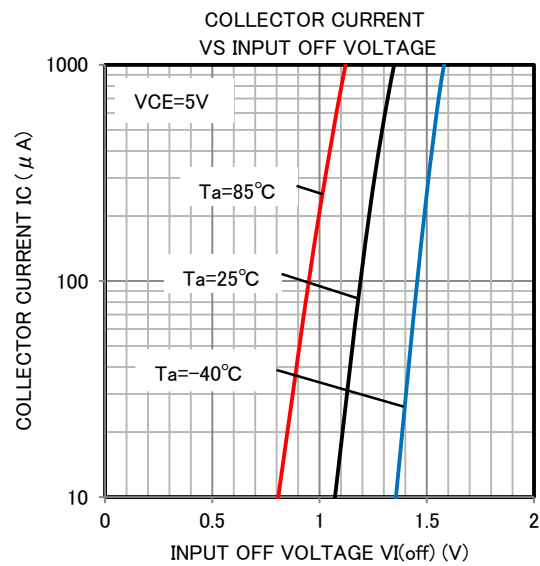
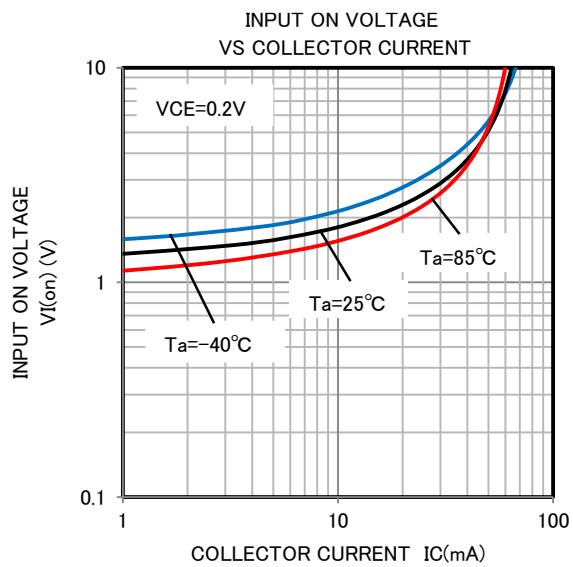
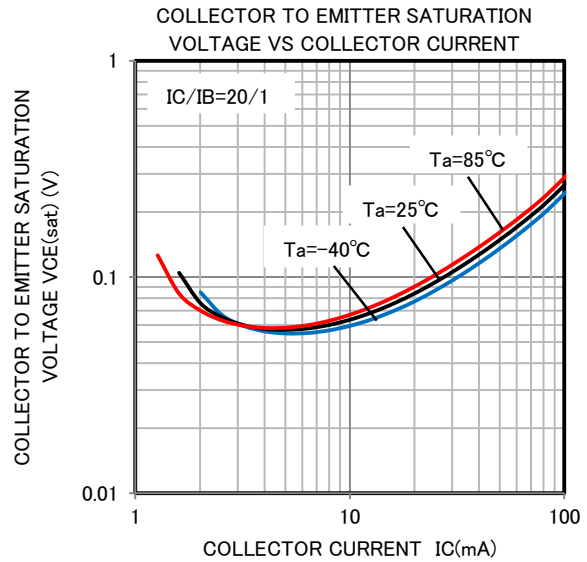
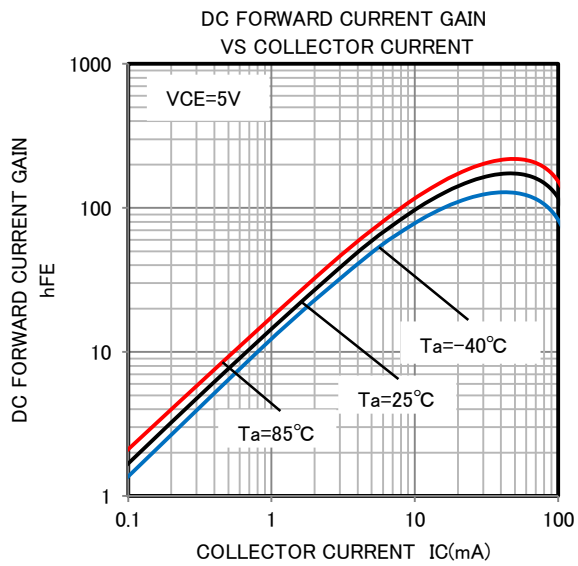
Symbol	Parameter	Test conditions	Limits			Unit	
			Min	Typ	Max		
V <sub>(BR)CEO</sub>	Collector to Emitter breakdown voltage	I <sub>C</sub> =100μA, R <sub>BE</sub> =∞	50	—	—	V	
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> =50V, I <sub>E</sub> =0	—	—	0.1	μA	
I <sub>EB0</sub>	Emitter cut off current	V <sub>EB</sub> =5V, I <sub>C</sub> =0	192	250	357	μA	
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	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	—	1.5	3.0	V	
V <sub>I(OFF)</sub>	Input off voltage	V <sub>CE</sub> =5V, I <sub>C</sub> =100μA	0.8	1.1	—	V	
R <sub>1</sub>	Input resistor	—	7	10	13	kΩ	
R <sub>2/R1</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	RTr1	—	200	—	MHz
			RTr2	—	150	—	

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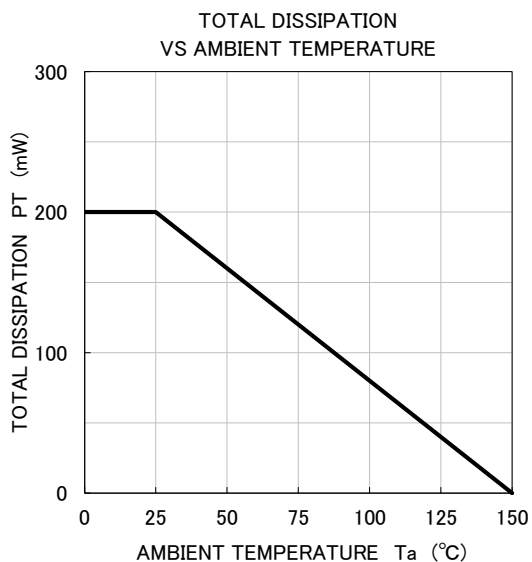
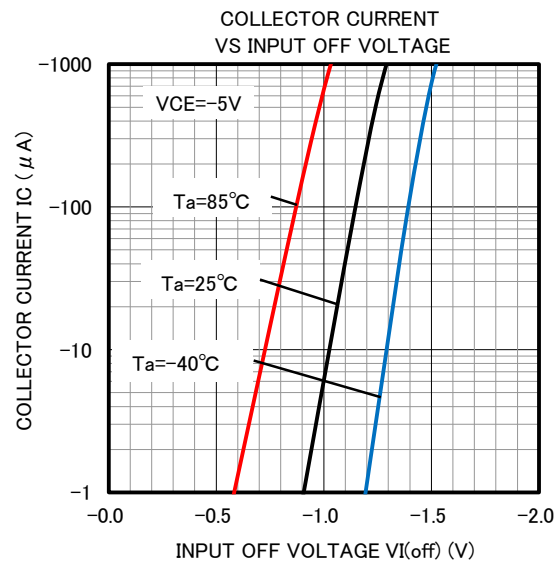
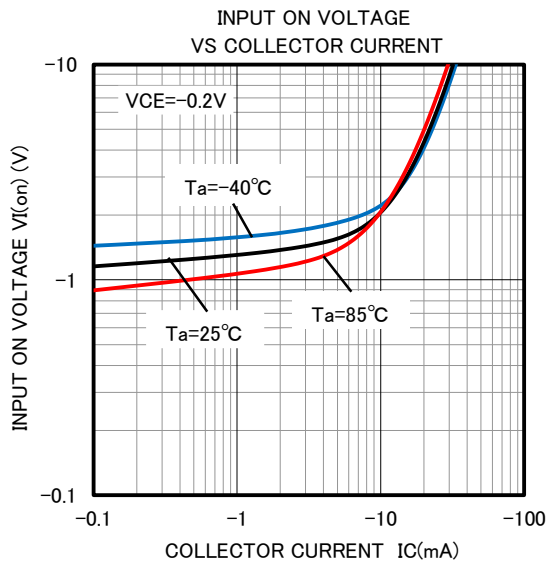
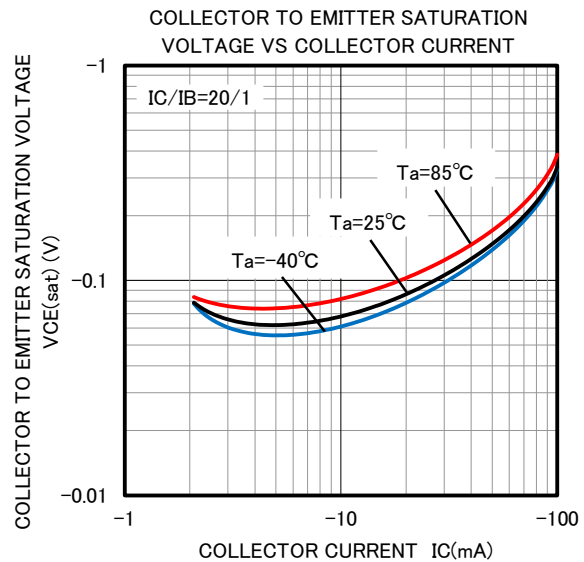
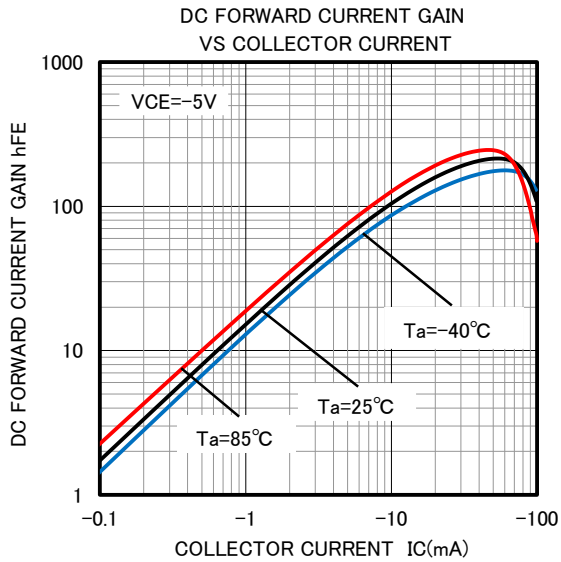
## TYPICAL CHARACTERISTICS (RT<sub>r</sub>1\_NPN)



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## TYPICAL CHARACTERISTICS (RT<sub>r</sub> 2\_PNP)



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