

# RT1N140M-T150

Transistor With Resistor  
For Switching Application  
Silicon NPN Epitaxial Type

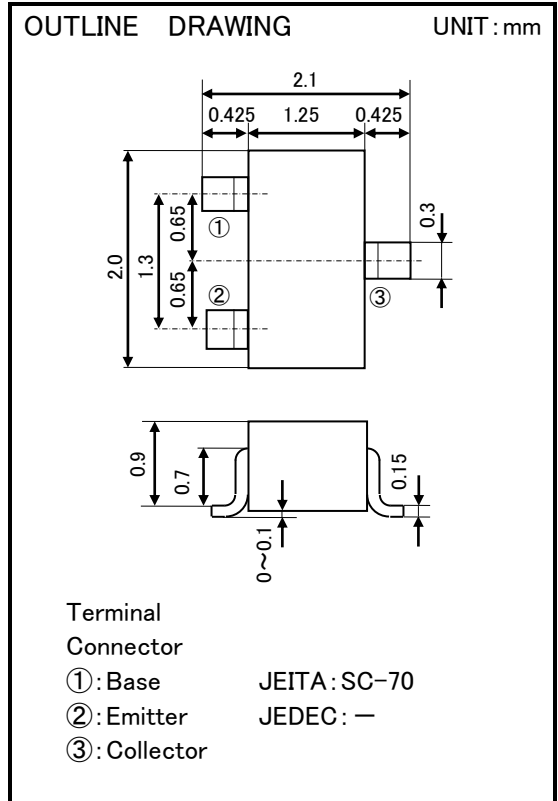
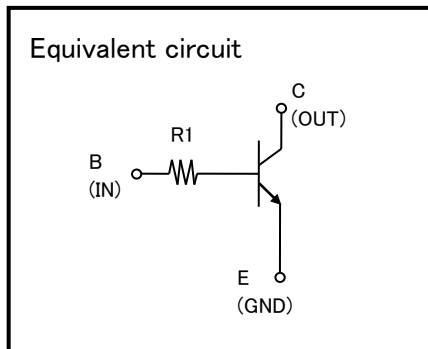
AEC-Q101 Compliance

## FEATURE

- Built-in bias resistor (R1=10kΩ)
- Mini package for easy mounting

## APPLICATION

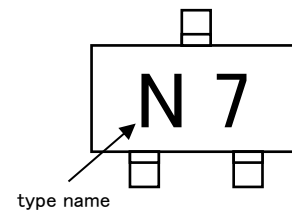
Inverted circuit, switching circuit, interface circuit, driver circuit.



## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT
V <sub>CB0</sub>	Collector to Base voltage	50	V
V <sub>EBO</sub>	Emitter to Base voltage	6	V
V <sub>CEO</sub>	Collector to Emitter voltage	50	V
I <sub>C</sub>	Collector current	100	mA
I <sub>CM</sub>	Peak Collector current	200	mA
P <sub>C</sub>	Collector dissipation	200	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

## MARKING



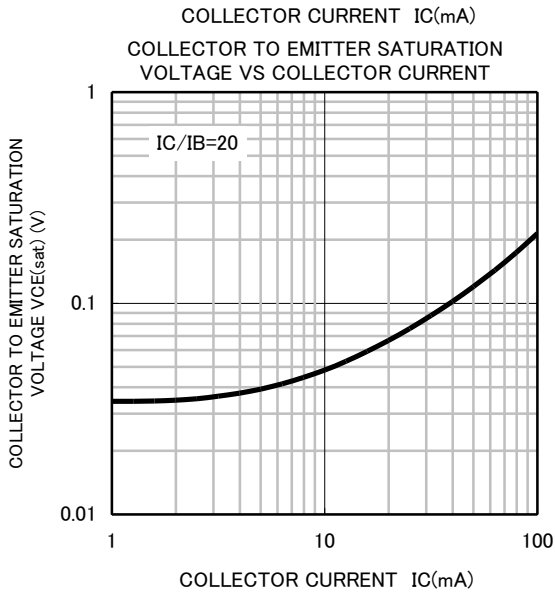
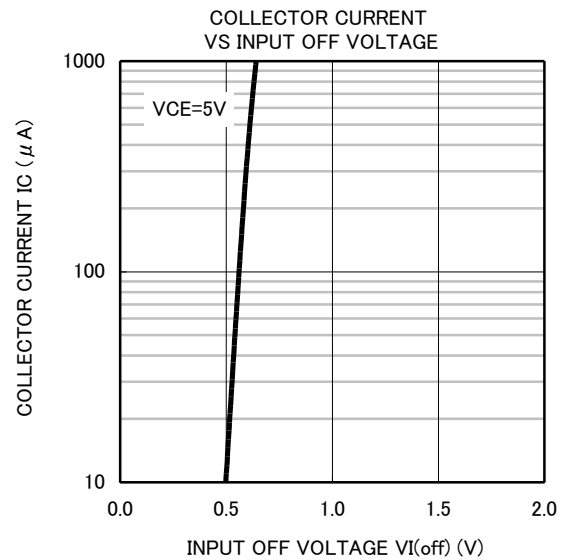
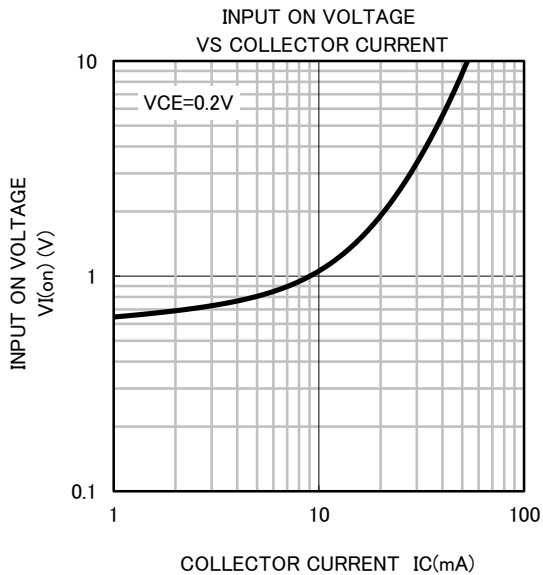
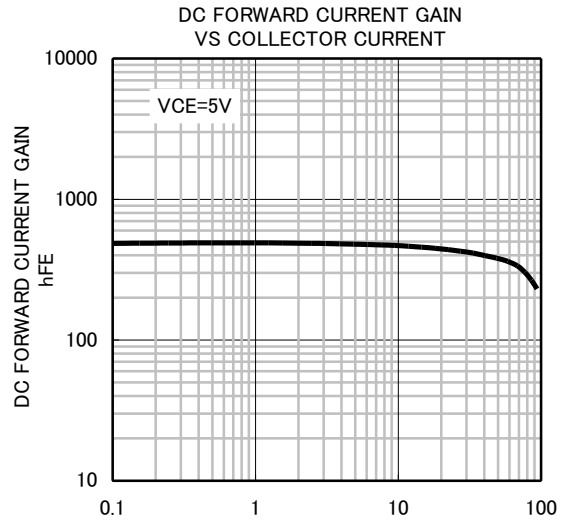
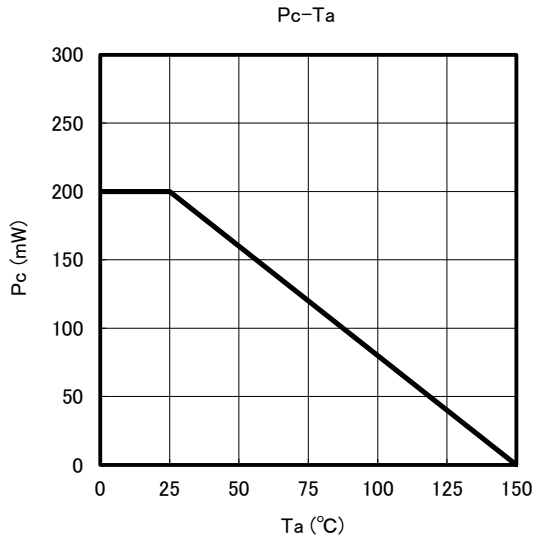
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
V <sub>(BR)CEO</sub>	C to E 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	—	—	0.1	μA
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	100	—	—	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA	—	0.1	0.3	V
R1	Input resistor	—	7	10	13	kΩ
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =6V, I <sub>E</sub> =-10mA	—	200	—	MHz

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## TYPICAL CHARACTERISTICS



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

·ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1) placement of substitutive, auxiliary, (2) use of non-flammable material or (3) prevention against any malfunction or mishap.

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