

# RT1N150X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

## DESCRIPTION

RT1N150X is a one chip transistor with built-in bias resistor, PNP type is RT1P150X.

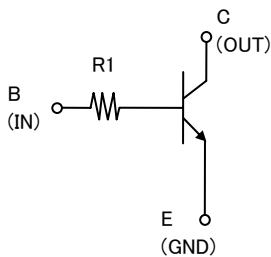
## FEATURE

• Built-in bias resistor (R1=100k $\Omega$ ).

## APPLICATION

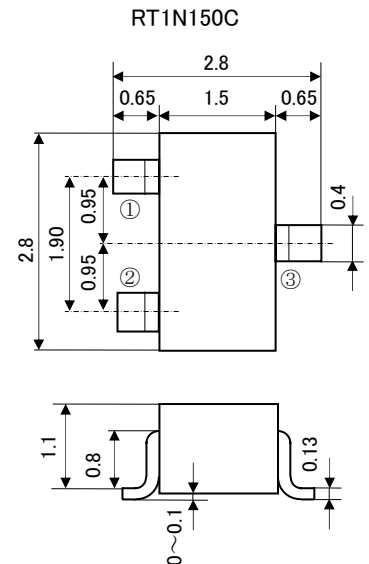
Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



## OUTLINE DRAWING

UNIT : mm



JEITA : SC-59

JEDEC : Similar to TO-236

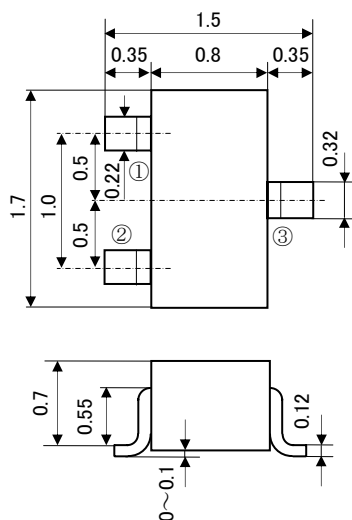
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N150U



JEITA : SC-75A

JEDEC : —

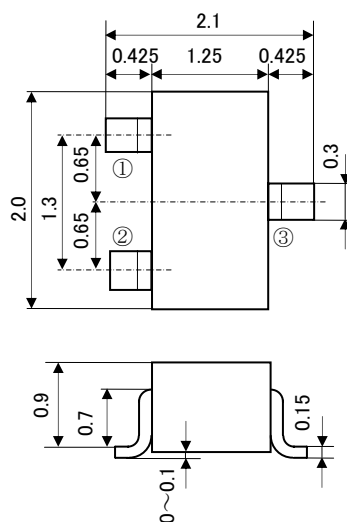
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N150M



JEITA : SC-70

JEDEC : —

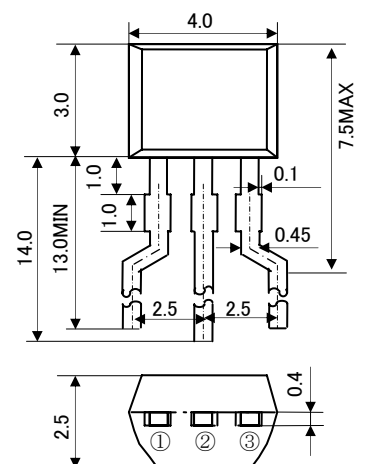
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N150S



JEITA : —

JEDEC : —

Terminal Connector

① : Emitter

② : Collector

③ : Base

# RT1N150X SERIES

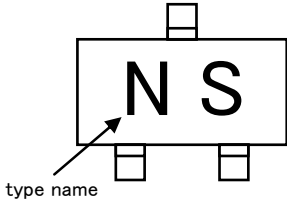
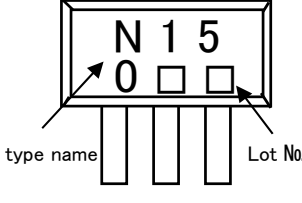
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## MARKING

RT1N150C RT1N150M RT1N150U	RT1N150S
	

## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N150U	RT1N150M	RT1N150C	RT1N150S	
V <sub>CBO</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(Ta=25°C)	150	200		450	mW
T <sub>j</sub>	Junction temperature	+150				°C
T <sub>stg</sub>	Storage temperature	-55~+150				°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C=100\mu A, R_{BE}=\infty$	50	—	—	V
$I_{CBO}$	Collector cut off current	$V_{CB}=50V, I_E=0$	—	—	0.1	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=5V, I_C=0$	—	—	0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE}=5V, I_C=1mA$	100	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=1mA, I_B=0.1mA$	—	—	0.3	V
$R_1$	Input resistor	—	—	100	—	k $\Omega$
$f_T$	Gain band width product	$V_{CE}=6V, I_E=-10mA$	—	200	—	MHz

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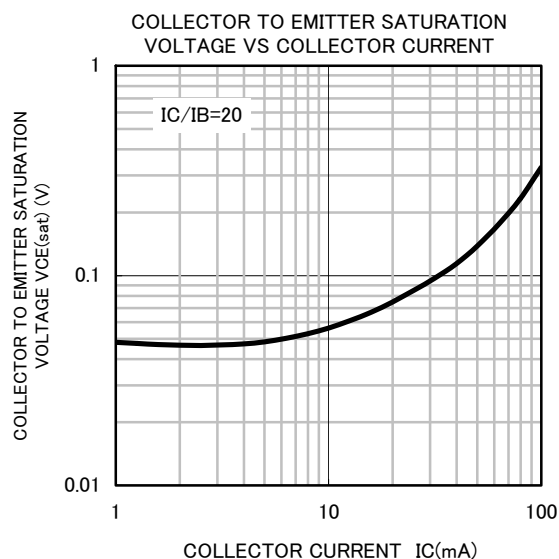
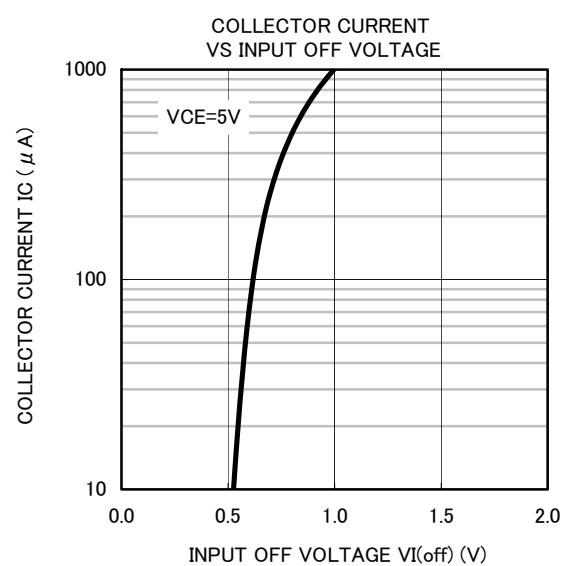
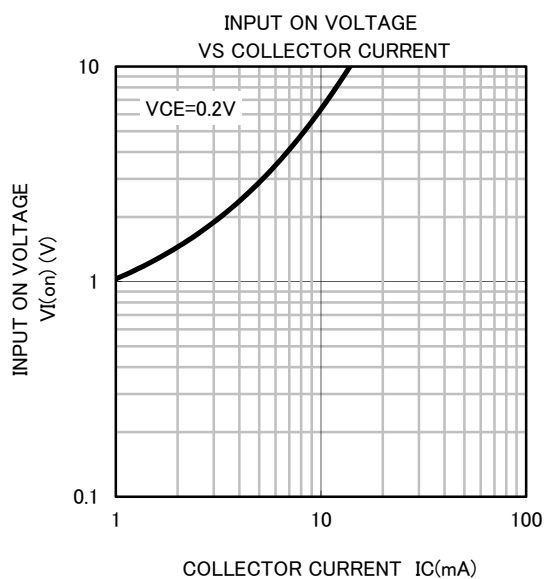
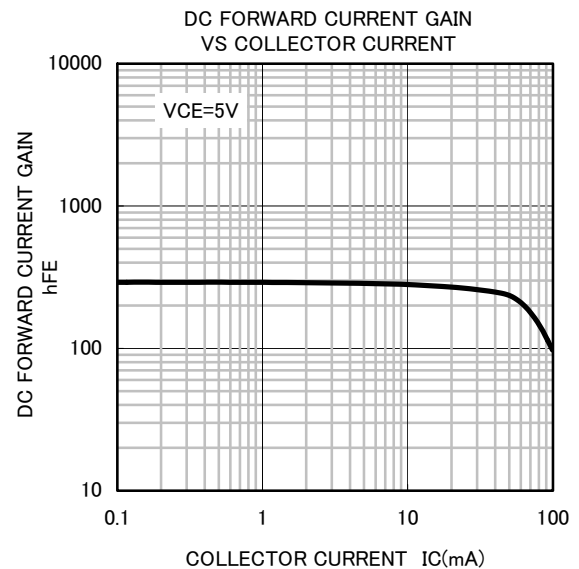
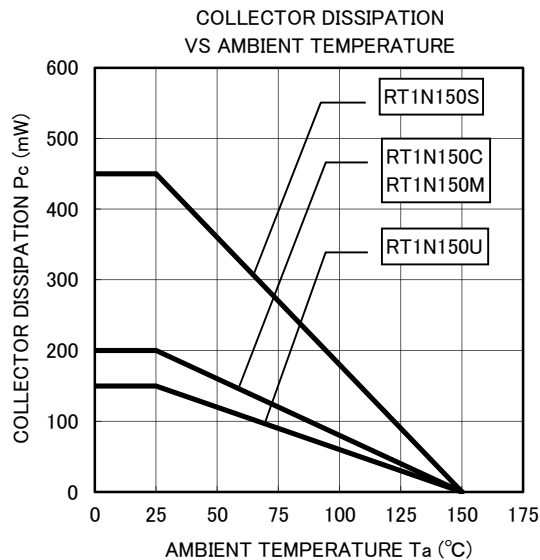
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## TYPICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )





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

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