

# RT1N44HX SERIES

<Transistor>

Transistor With Resistor  
For Switching Application  
Silicon NPN Epitaxial Type

## DESCRIPTION

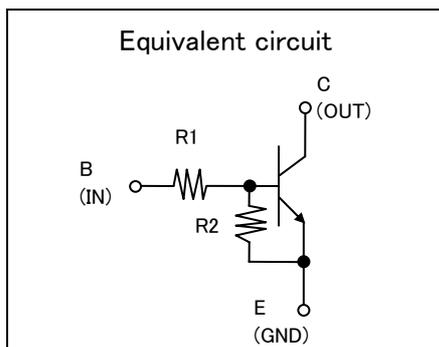
RT1N44HX is one chip transistor with built-in bias resistor, PNP type is RT1P44HX.

## FEATURE

• Built-in bias resistor (R1=47kΩ, R2=22kΩ).

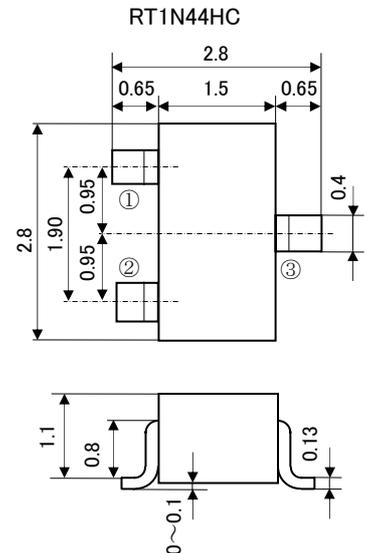
## APPLICATION

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



## OUTLINE DRAWING

UNIT : mm



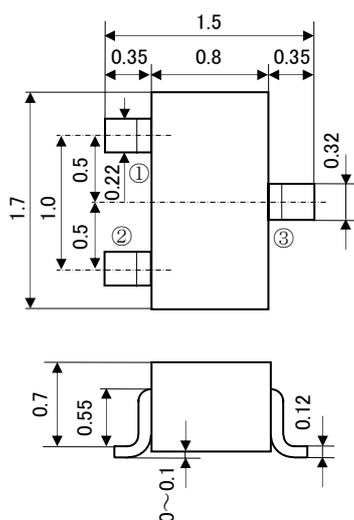
JEITA : SC-59

JEDEC : Similar to TO-236

Terminal Connector

- ① : Base
- ② : Emitter
- ③ : Collector

**RT1N44HU**



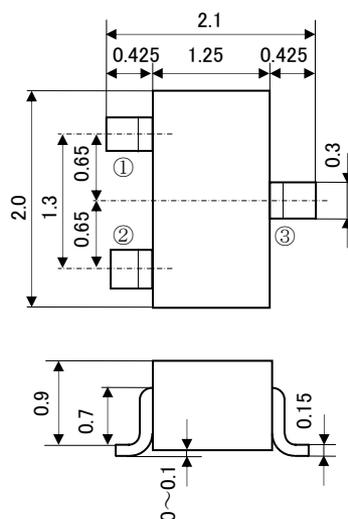
JEITA : SC-75A

JEDEC : —

Terminal Connector

- ① : Base
- ② : Emitter
- ③ : Collector

**RT1N44HM**



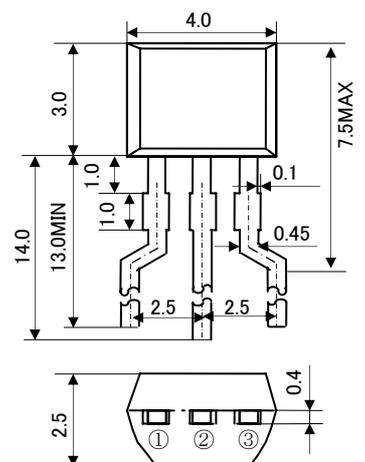
JEITA : SC-70

JEDEC : —

Terminal Connector

- ① : Base
- ② : Emitter
- ③ : Collector

**RT1N44HS**



JEITA : —

JEDEC : —

Terminal Connector

- ① : Emitter
- ② : Collector
- ③ : Base

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## MARKING

RT1N44HC RT1N44HM RT1N44HU	RT1N44HS

## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N44HU	RT1N44HM	RT1N44HC	RT1N44HS	
$V_{CBO}$	Collector to Base voltage	50				V
$V_{EBO}$	Emitter to Base voltage	10				V
$V_{CEO}$	Collector to Emitter voltage	50				V
$V_{IN}$	Input voltage	40				V
$I_C$	Collector current	100				mA
$I_{CM}$	Peak Collector current	200				mA
$P_C$	Collector dissipation(Ta=25°C)	150	200	450	mW	
$T_j$	Junction temperature	+150				°C
$T_{stg}$	Storage temperature	-55~+150				°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

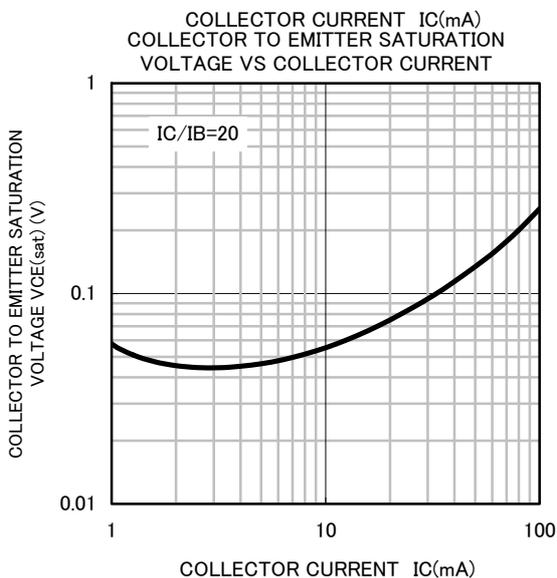
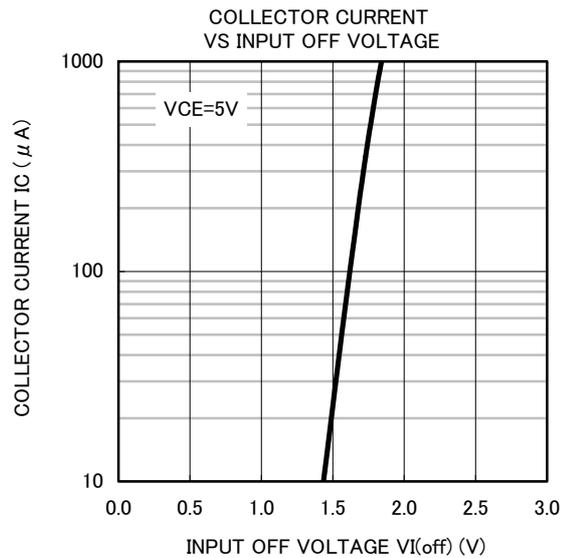
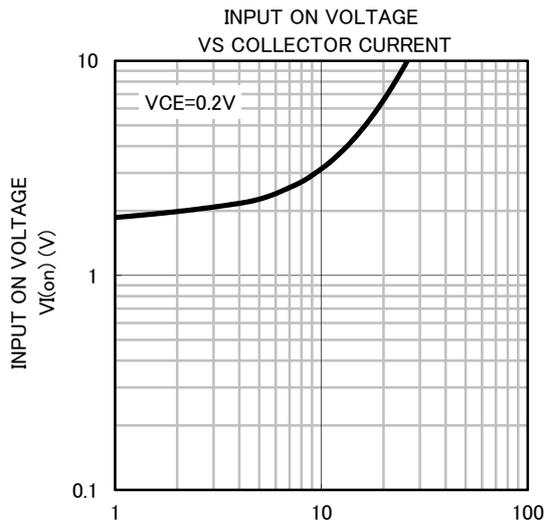
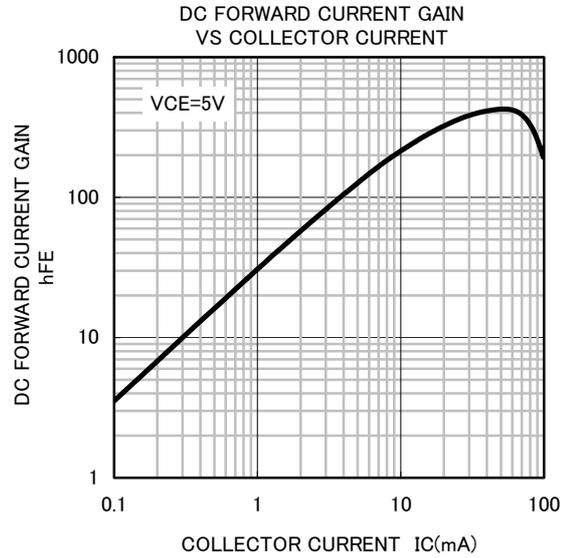
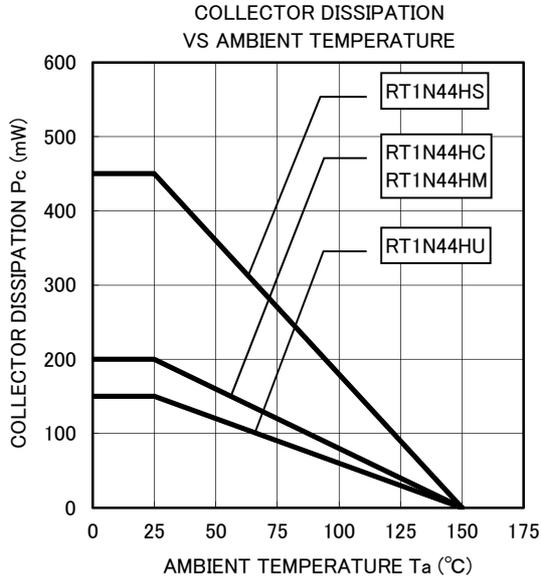
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C=100\mu A, R_{BE}=\infty$	50	—	—	V
$I_{CBO}$	Collector cut off current	$V_{CB}=50V, I_E=0$	—	—	0.1	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=5V, I_C=0$	54	72	105	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE}=5V, I_C=5mA$	56	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$	—	—	0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE}=0.2V, I_C=5mA$	—	2.6	6.3	V
$V_{I(OFF)}$	Input off voltage	$V_{CE}=5V, I_C=100\mu A$	1.3	1.7	—	V
$R_1$	Input resistor	—	33	47	61	k $\Omega$
$R_2/R_1$	Resistor ratio	—	0.37	0.47	0.57	—
$f_T$	Gain band width product	$V_{CE}=6V, I_E=-10mA$	—	200	—	MHz

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## TYPICAL CHARACTERISTICS (Ta=25°C)





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

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