

RT1N14HX SERIES

〈Transistor〉

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT1N14HX is one chip transistor
with built-in bias resistor, PNP type is RT1P14HX.

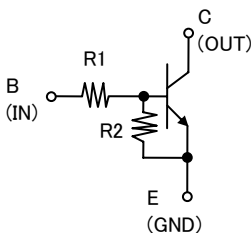
FEATURE

• Built-in bias resistor (R1=10kΩ, R2=4.7kΩ).

APPLICATION

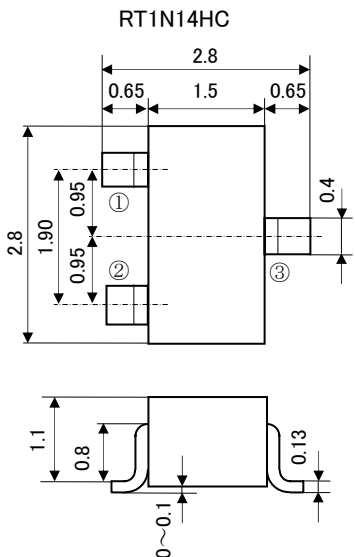
Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING

UNIT : mm



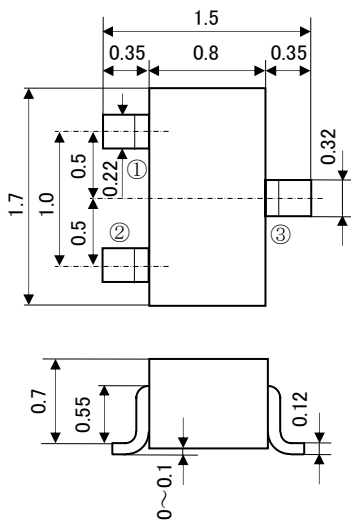
JEITA : SC-59

JEDEC : Similar to TO-236

Terminal Connector

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

RT1N14HU



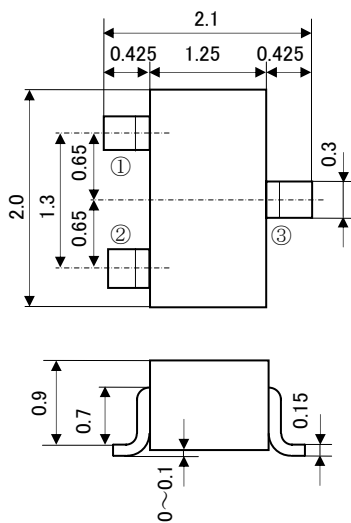
JEITA : SC-75A

JEDEC : —

Terminal Connector

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

RT1N14HM



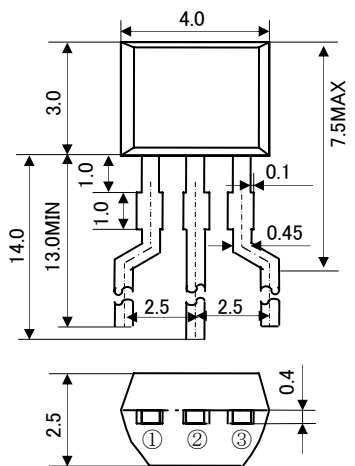
JEITA : SC-70

JEDEC : —

Terminal Connector

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

RT1N14HS



JEITA : —

JEDEC : —

Terminal Connector

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

RT1N14HX SERIES

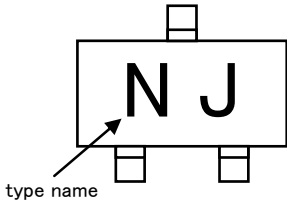
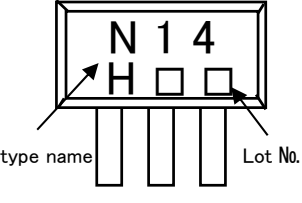
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MARKING

RT1N14HC RT1N14HM RT1N14HU	RT1N14HS
	

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N14HU	RT1N14HM	RT1N14HC	RT1N14HS	
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	30				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	μA
I_{EBO}	Emitter cut off current	$V_{CE}=5V, I_C=0$	255	340	493	μA
h_{FE}	DC forward current gain	$V_{CE}=5V, I_C=10mA$	24	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$	—	—	0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE}=0.2V, I_C=5mA$	—	2.1	3.8	V
$V_{I(OFF)}$	Input off voltage	$V_{CE}=5V, I_C=100\mu A$	1.3	1.7	—	V
R_1	Input resistor	—	7	10	13	k Ω
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

RT1N14HX SERIES

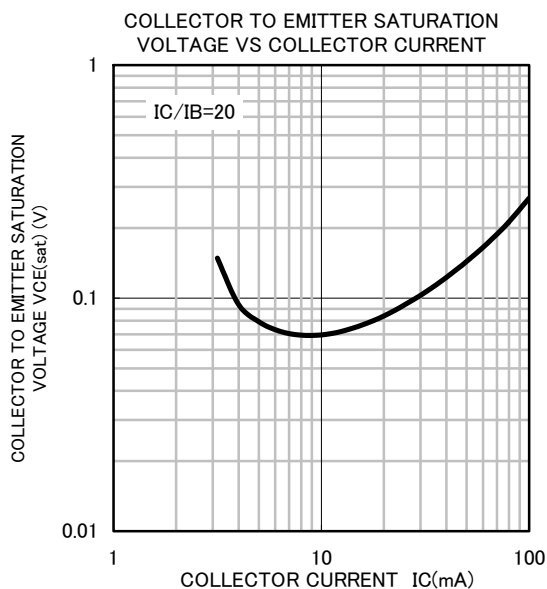
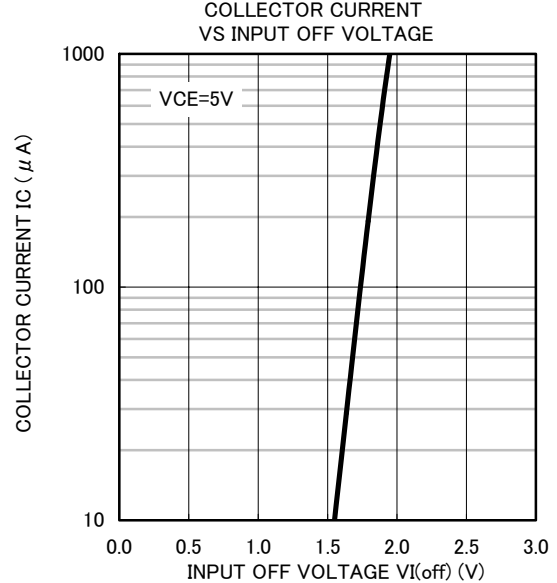
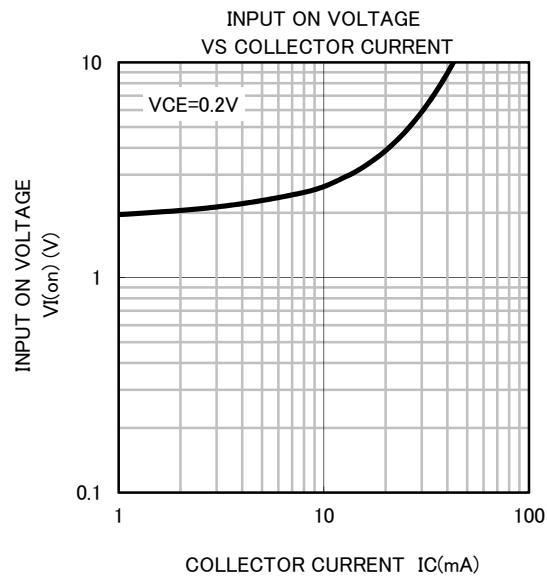
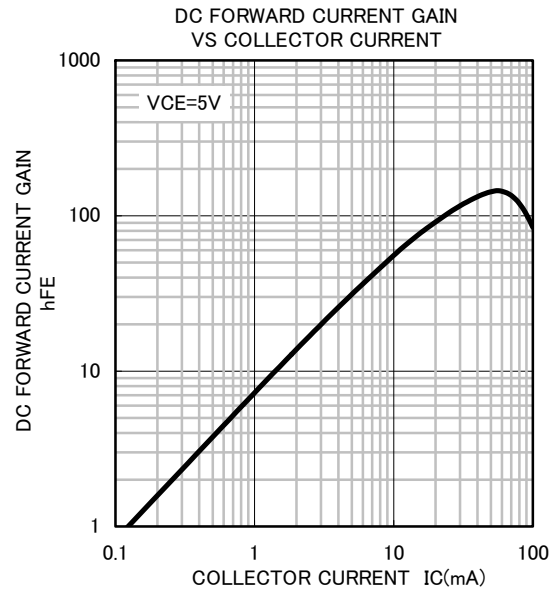
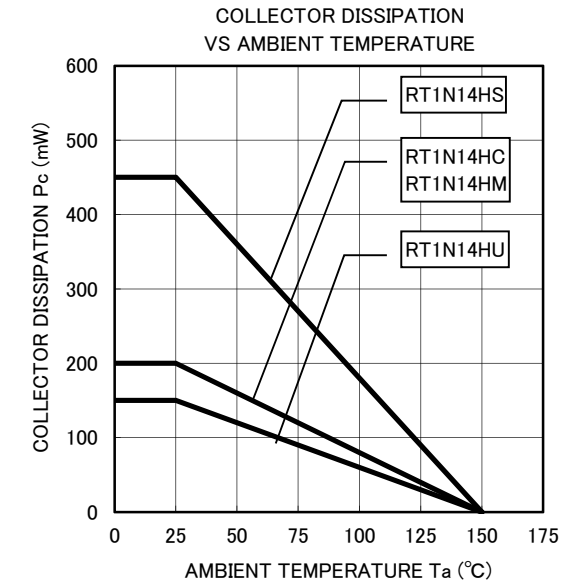
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TYPICAL CHARACTERISTICS (Ta=25°C)





Keep safety first in your circuit designs!

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