

RT1N14HX SERIES

Transistor

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

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

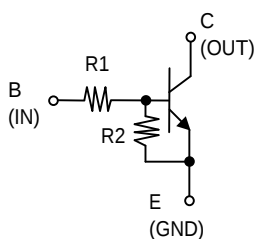
FEATURE

- Built-in bias resistor ($R1=10k\Omega$, $R2=4.7k\Omega$).

APPLICATION

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

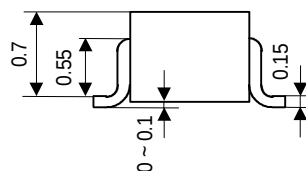
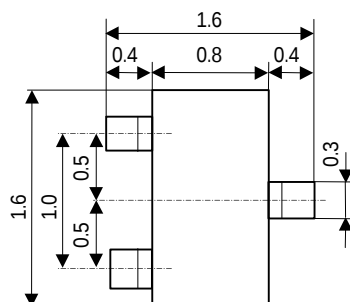
Equivalent circuit



OUTLINE DRAWING

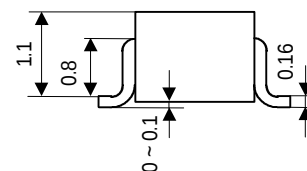
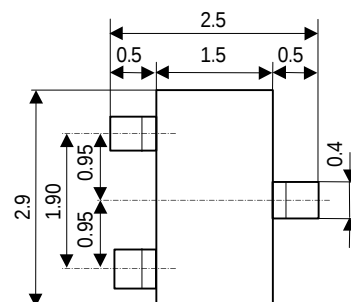
UNIT : mm

RT1N14HU



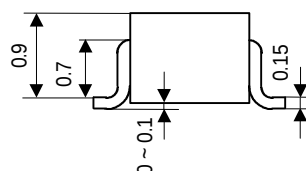
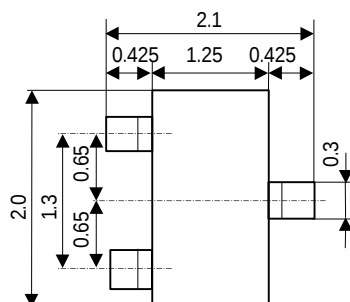
JEITA: -
JEDEC: -
Terminal Connector
: Base
: Emitter
: Collector

RT1N14HC



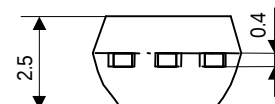
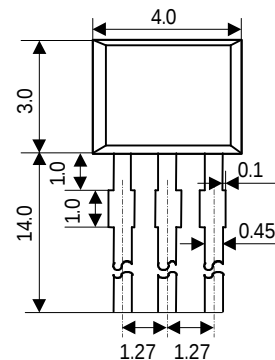
JEITA: SC-59
JEDEC: Similar to TO-236
Terminal Connector
: Base
: Emitter
: Collector

RT1N14HM



JEITA: SC-70
JEDEC: -
Terminal Connector
: Base
: Emitter
: Collector

RT1N14HS



JEITA: -
JEDEC: -
Terminal Connector
: Emitter
: Collector
: Base

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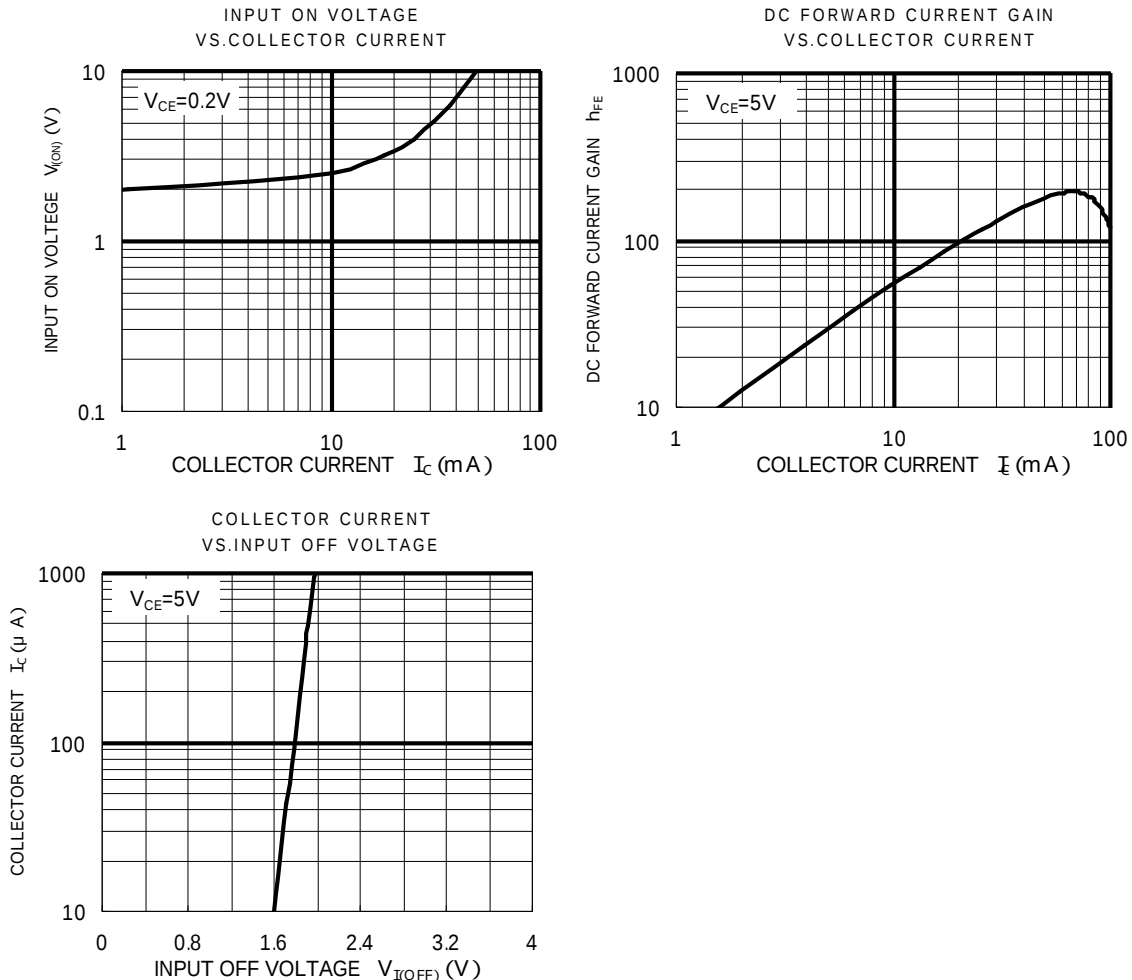
MAXIMUM RATING (Ta=25 °C)

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
I _C	Collector current	100				mA
I _{CM}	Peak Collector current	200				mA
P _C	Collector dissipation(Ta=25 °C)	150	200		450	mW
Tj	Junction temperature	+150	+150			
Tstg	Storage temperature	-55 ~ +150		-55 ~ +150		

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
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 resistance		7	10	13	k Ω
R_2 / R_1	Resistance ratio		0.37	0.47	0.57	
f_T	Gain band width product	$V_{CE}=6V, I_E=-10mA$		200		MHz

TYPICAL CHARACTERISTICS





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