RT1P14HX SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

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

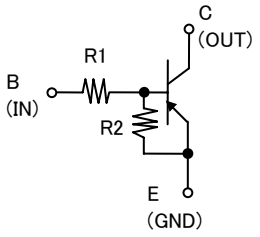
FEATURE

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

APPLICATION

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

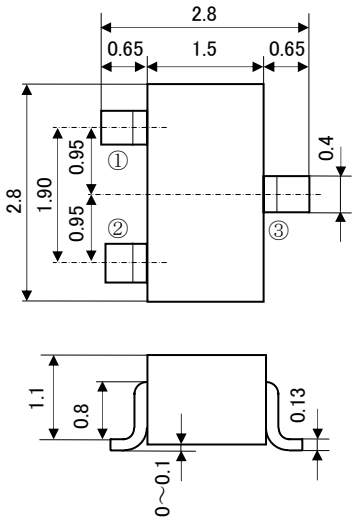
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

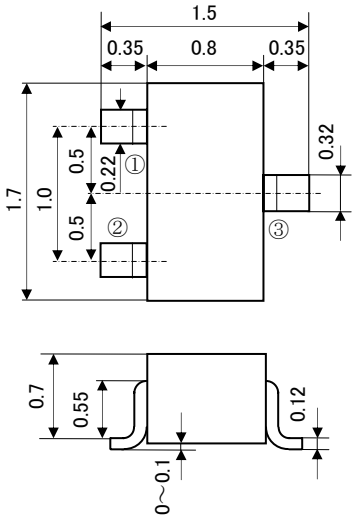
RT1P14HC



JEITA : SC-59
JEDEC : Similar to TO-236

Terminal Connector
①:Base
②:Emitter
③:Collector

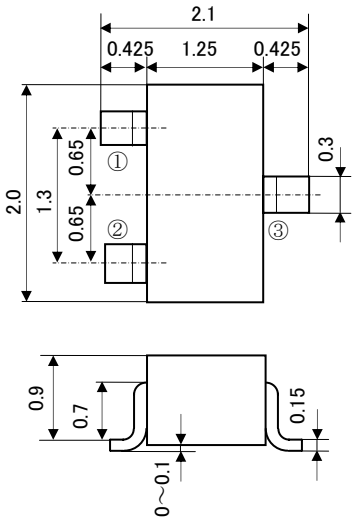
RT1P14HU



JEITA : SC-75A
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

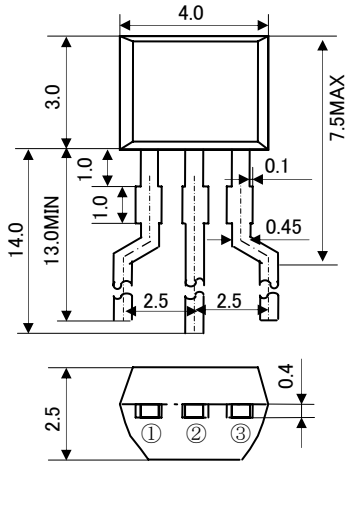
RT1P14HM



JEITA : SC-70
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1P14HS



JEITA : —
JEDEC : —

Terminal Connector
①:Emitter
②:Collector
③:Base

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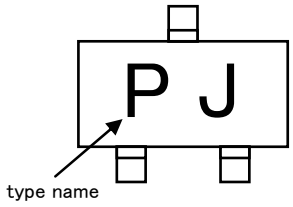
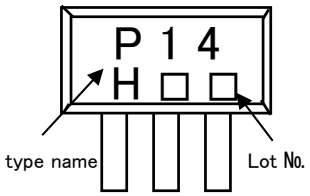
MARKING

RT1P14HC RT1P14HM RT1P14HU	RT1P14HS
	

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING				UNIT
		RT1P14HU	RT1P14HM	RT1P14HC	RT1P14HS	
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℃)	150	200		450	mW
Tj	Junction temperature	+150				℃
Tstg	Storage temperature	−55～+150				℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	I_C=−100μA, R_{BE}=∞	−50	—	—	V
I_{CBO}	Collector cut off current	V_{CB}=−50V, I_E=0	—	—	−0.1	μA
I_{EBO}	Emitter cut off current	V_{EB}=−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=−100μA	−1.3	−1.7	—	V
R_1	Input resistor	—	7	10	13	kΩ
R_2/R_1	Resistor ratio	—	0.37	0.47	0.57	—
f_T	Gain band width product	V_{CE}=−6V, I_E=10mA	—	150	—	MHz

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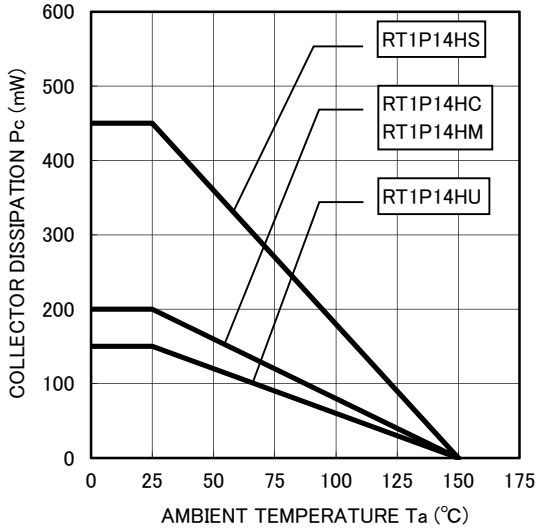
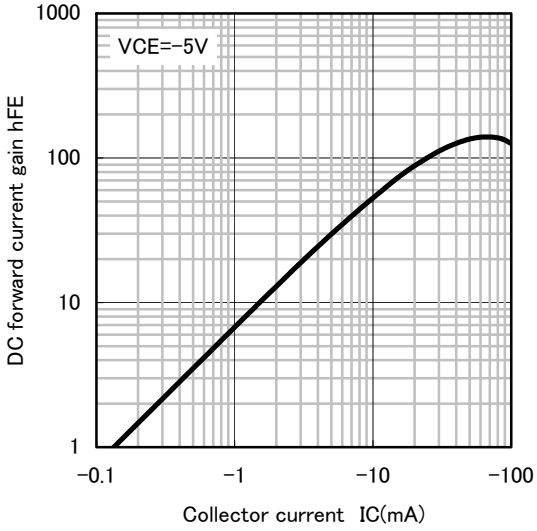
TYPICAL CHARACTERISTICS (Ta=25℃)

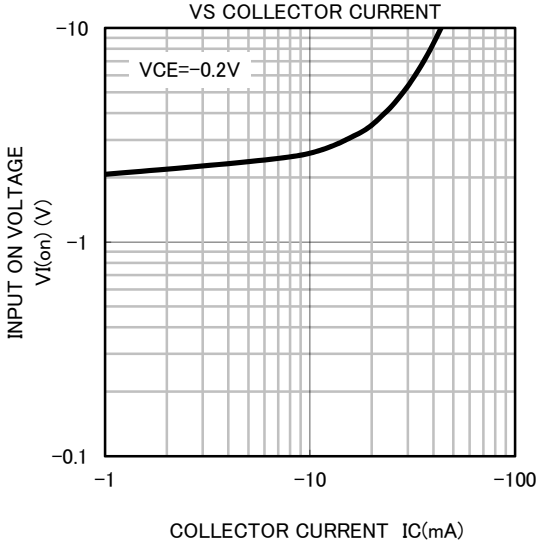
COLLECTOR DISSIPATION
VS AMBIENT TEMPERATURE



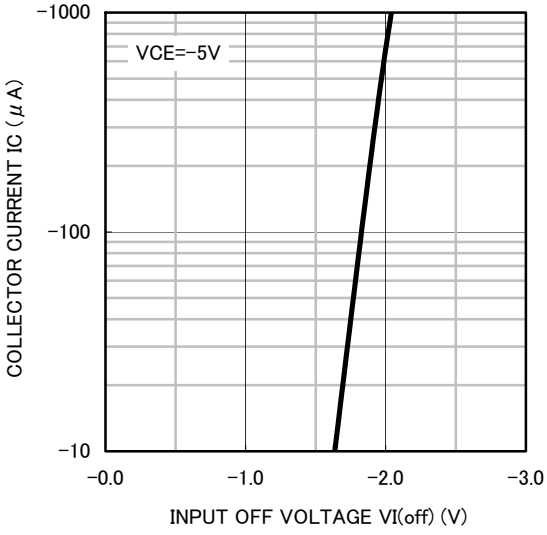
DC forward current gain-Collector current



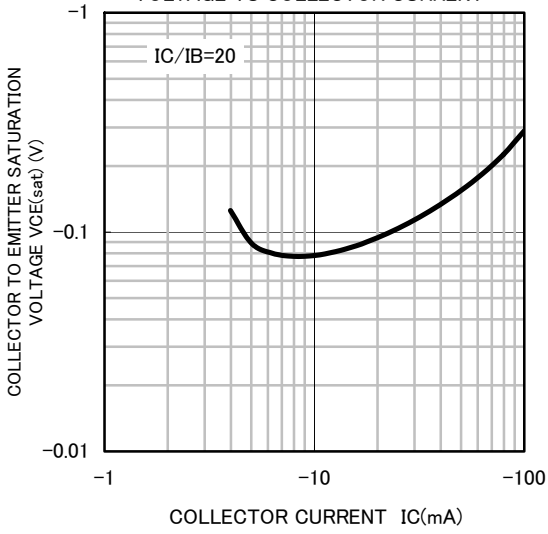
INPUT ON VOLTAGE
VS COLLECTOR CURRENT



COLLECTOR CURRENT
VS INPUT OFF VOLTAGE



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS COLLECTOR CURRENT



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