RT1N234X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

RT1N234X is a one chip transistor
with built-in bias resistor,PNP type is RT1P234X.

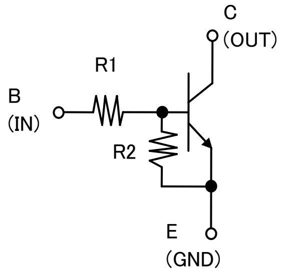
FEATURE

・Built-in bias resistor (R1=2.2kΩ,R2=10kΩ).

APPLICATION

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

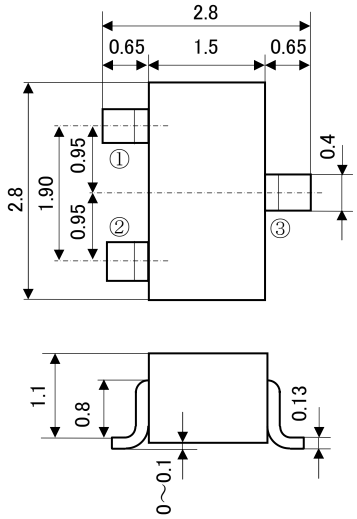
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

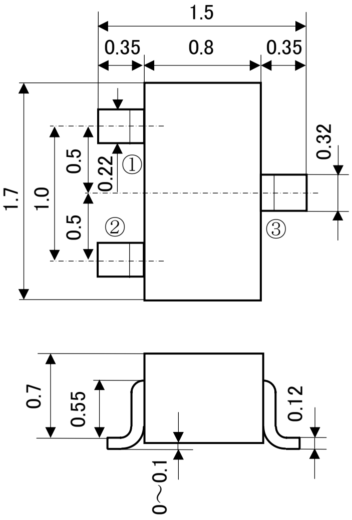
RT1N234C



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

Terminal Connector
①: Base
②: Emitter
③: Collector

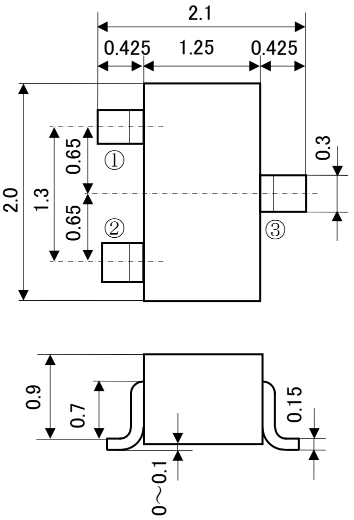
RT1N234U



JEITA : SC-75A
JEDEC : ―

Terminal Connector
①: Base
②: Emitter
③: Collector

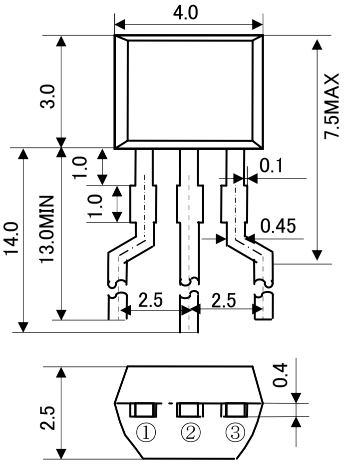
RT1N234M



JEITA : SC-70
JEDEC : ―

Terminal Connector
①: Base
②: Emitter
③: Collector

RT1N234S



JEITA : ―
JEDEC : ―

Terminal Connector
①: Emitter
②: Collector
③: Base

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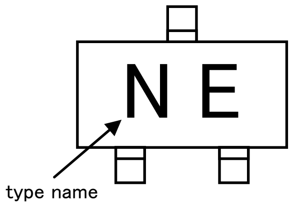
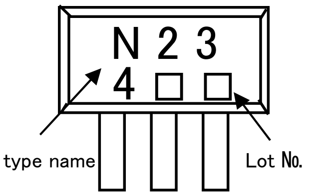
MARKING

RT1N234C RT1N234M RT1N234U	RT1N234S
	

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N234U	RT1N234M	RT1N234C	RT1N234S	
V_{CBO}	Collector to Base voltage	50				V
V_{EBO}	Emitter to Base voltage	6				V
V_{CEO}	Collector to Emitter voltage	50				V
V_{IN}	Input voltage	12				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 breakdown 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	307	410	594	μA
h_{FE}	DC forward current gain	V_{CE}=5V, I_C=10mA	33	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=10mA, I_B=0.5mA	—	0.1	0.3	V
$V_{I(ON)}$	Input on voltage	V_{CE}=0.2V, I_C=5mA	—	0.8	1.4	V
$V_{I(OFF)}$	Input off voltage	V_{CE}=5V, I_C=100μA	0.5	0.7	—	V
R_1	Input resistor	—	1.5	2.2	2.9	kΩ
R_2／R_1	Resistor ratio	—	3.8	4.7	5.6	—
f_T	Gain band width product	V_{CE}=6V, I_E=−10mA	—	200	—	MHz

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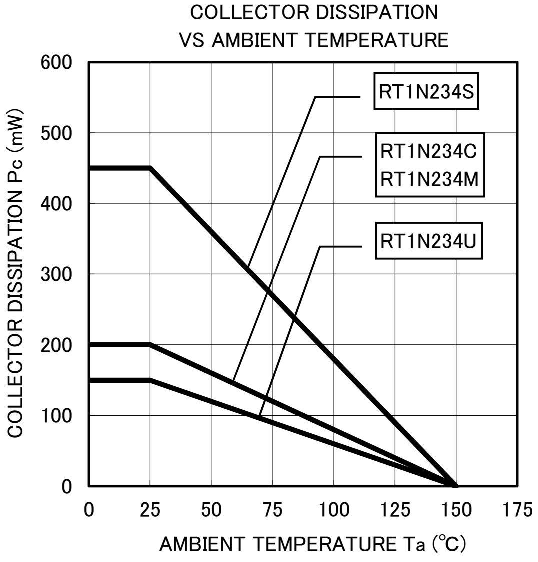
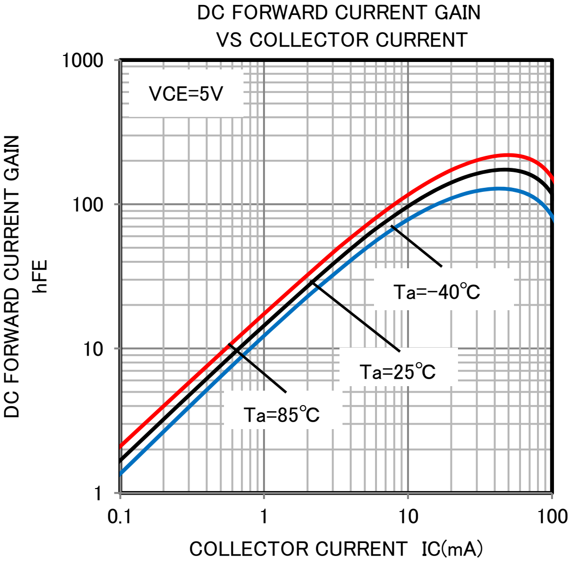
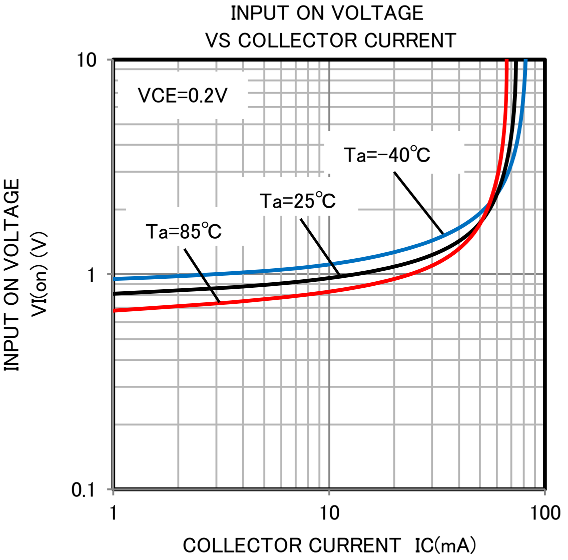
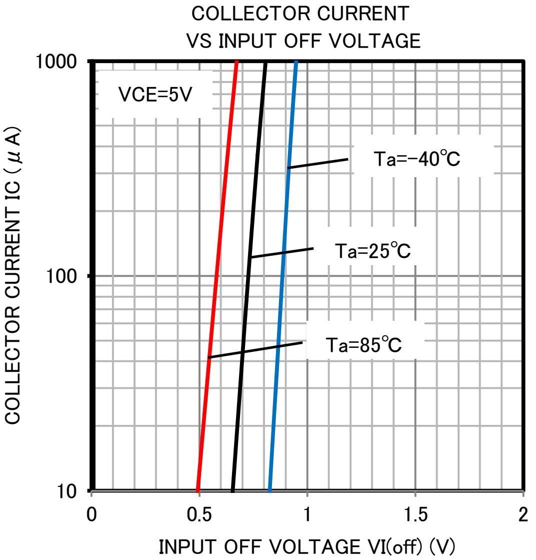
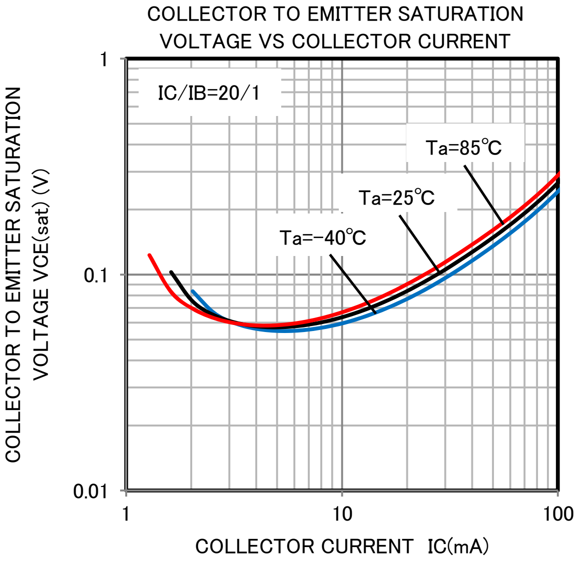
TYPICAL CHARACTERISTICS











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