

RT1N242X SERIES

<Transistor>

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

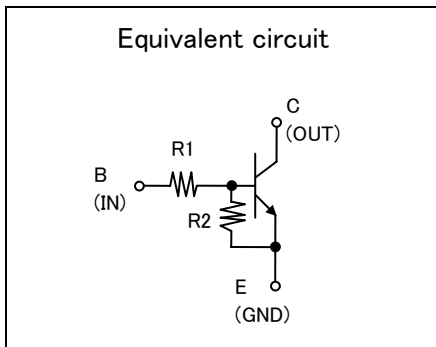
RT1N242X is a one chip transistor with built-in bias resistor, PNP type is RT1P242X.

FEATURE

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

APPLICATION

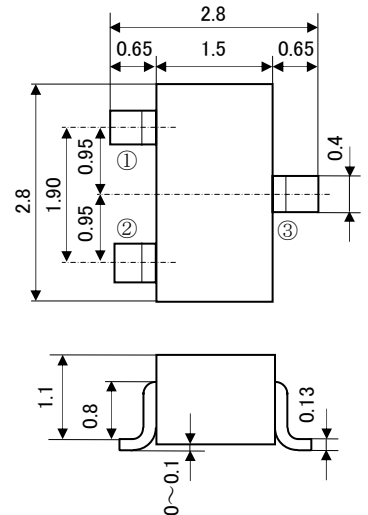
Inverted circuit, switching circuit, interface circuit, driver circuit.



OUTLINE DRAWING

UNIT : mm

RT1N242C



JEITA: SC-59

JEDEC: Similar to TO-236

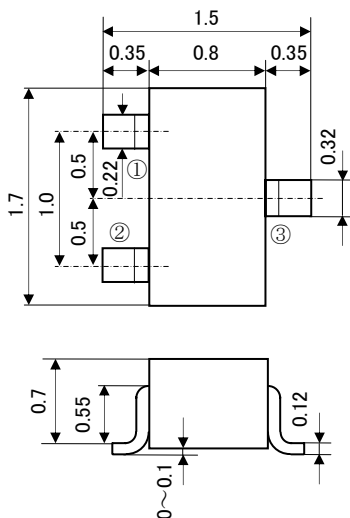
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N242U



JEITA: SC-75A

JEDEC: —

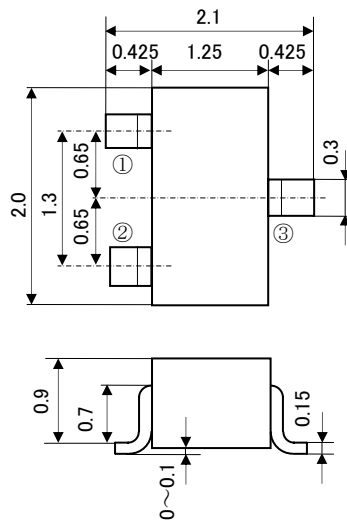
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N242M



JEITA: SC-70

JEDEC: —

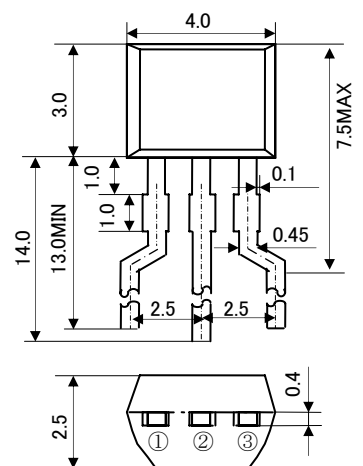
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N242S



JEITA: —

JEDEC: —

Terminal Connector

①: Emitter

②: Collector

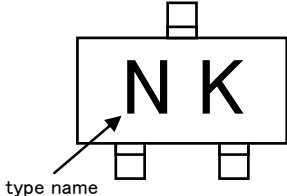
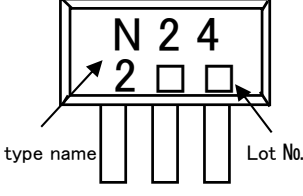
③: Base

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MARKING

RT1N242C RT1N242M RT1N242U	RT1N242S
	

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N242U	RT1N242M	RT1N242C	RT1N242S	
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 μA, 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	54	72	105	μA
h _{FE}	DC forward current gain	V _{CE} =5V, I _C =5mA	68	—	—	—
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	—	1.2	3.0	V
V _{I(OFF)}	Input off voltage	V _{CE} =5V, I _C =100 μA	0.6	0.8	—	V
R ₁	Input resistor	—	15	22	29	kΩ
R ₂ /R ₁	Resistor ratio	—	1.7	2.1	2.6	—
f _T	Gain band width product	V _{CE} =6V, I _E =-10mA	—	200	—	MHz

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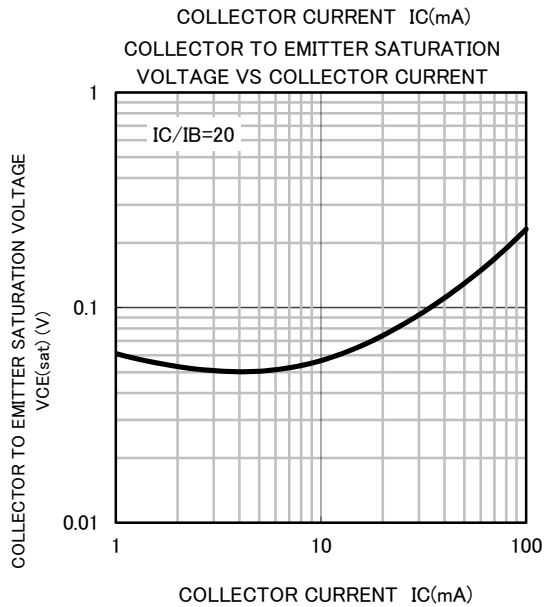
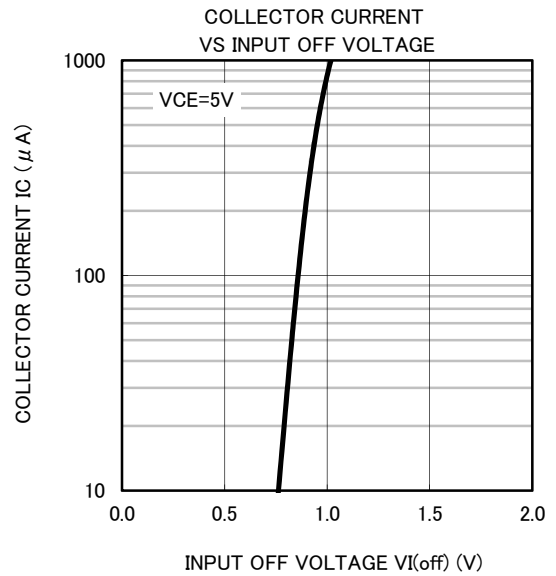
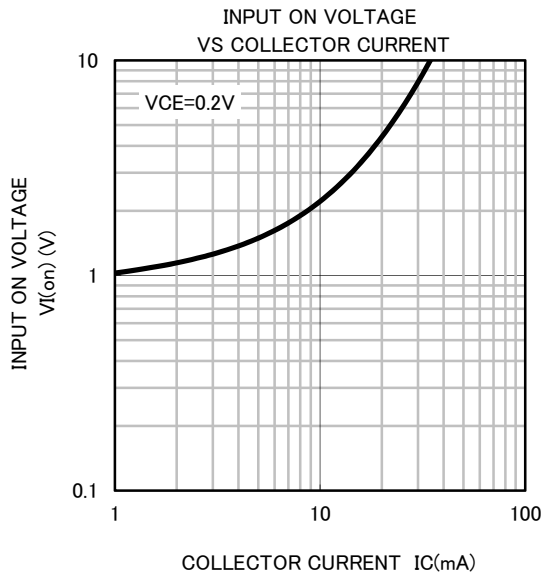
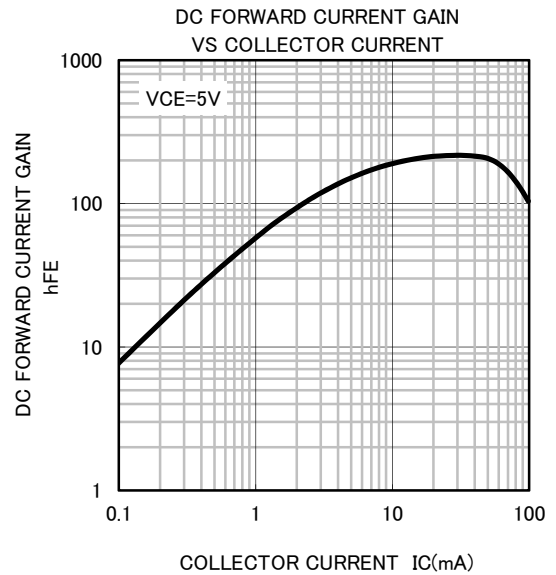
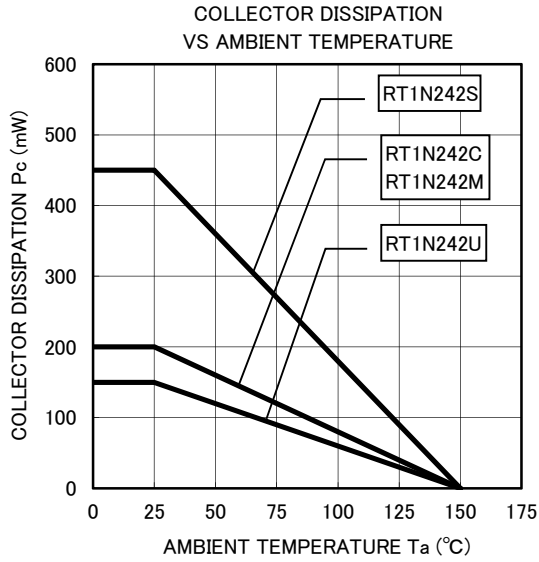
<Transistor>

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

TYPICAL CHARACTERISTICS (Ta=25°C)





Keep safety first in your circuit designs!

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