RT1P242X SERIES

〈Transistor〉

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

DESCRIPTION

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

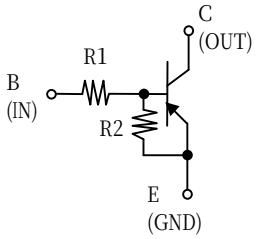
FEATURE

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

APPLICATION

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

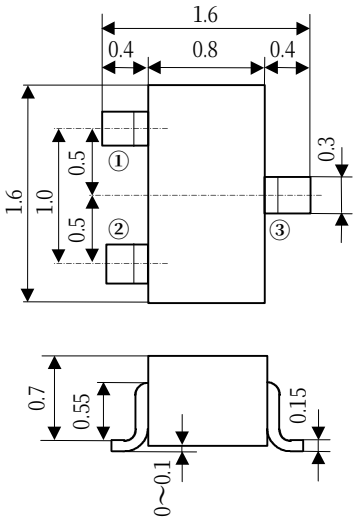
Equivalent circuit



OUTLINE DRAWING

UNIT：mm

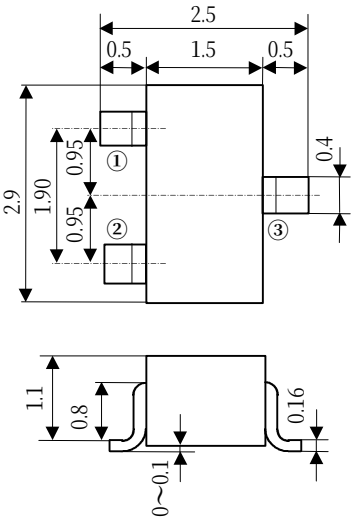
RT1P242U



JEITA：—
JEDEC：—

Terminal Connector
①：Base
②：Emitter
③：Collector

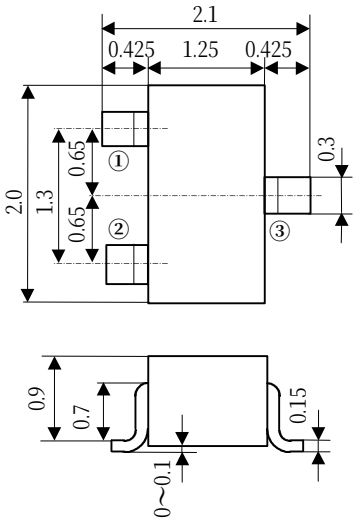
RT1P242C



JEITA：SC-59
JEDEC：Similar to TO-236

Terminal Connector
①：Base
②：Emitter
③：Collector

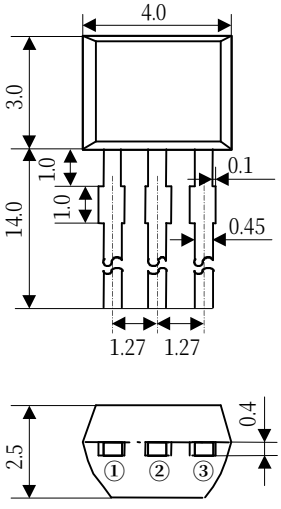
RT1P242M



JEITA：SC-70
JEDEC：—

Terminal Connector
①：Base
②：Emitter
③：Collector

RT1P242S



JEITA：—
JEDEC：—

Terminal Connector
①：Emitter
②：Collector
③：Base

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〈Transistor〉

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

MAXIMUM RATING (Ta=25°C)

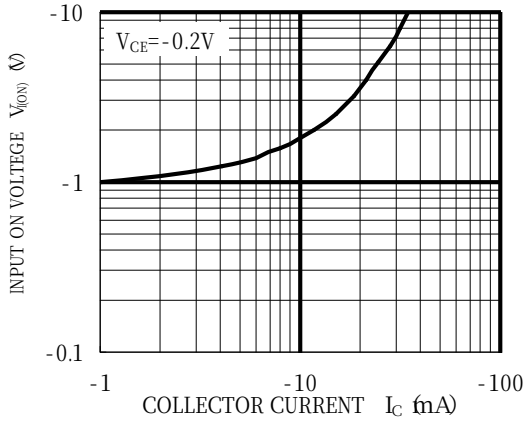
SYMBOL	PARAMETER	RATING				UNIT
		RT1P242U	RT1P242M	RT1P242C	RT1P242S	
V_{CBO}	Collector to Base voltage	-50				V
V_{EBO}	Emitter to Base voltage	-10				V
V_{CEO}	Collector to Emitter voltage	-50				V
I_C	Collector current	-100				mA
I_{CM}	Peak Collector current	-200				mA
P_C	Collector dissipation(Ta=25°C)	150	200		450	mW
Tj	Junction temperature	+150	+150			°C
Tstg	Storage temperature	-55～+150	-55～+150			°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

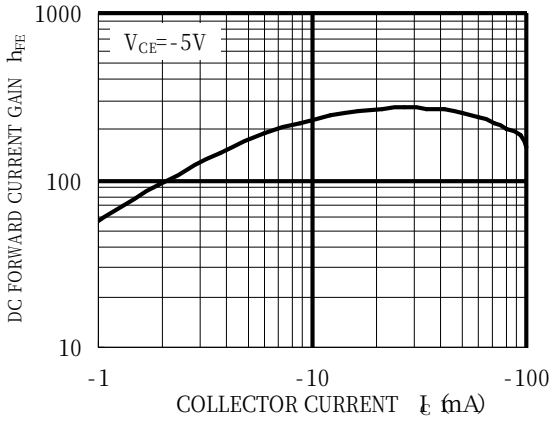
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	I_C=-100μA, R_{BE}=∞	-50			V
I_{CBO}	Collector cut off current	V_{CB}=-50V, I_E=0			-0.1	μA
h_{FE}	DC forward current gain	V_{CE}=-5V, I_C=-5mA	68			—
$V_{CE(sat)}$	C to E saturation voltage	I_C=-10mA, 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=-100μA	-0.6	-0.8		V
R_1	Input resistance		15	22	29	kΩ
R_2/R_1	Resistance ratio		1.7	2.1	2.6	
f_T	Gain band width product	V_{CE}=-6V, I_E=10mA		150		MHz

TYPICAL CHARACTERISTICS

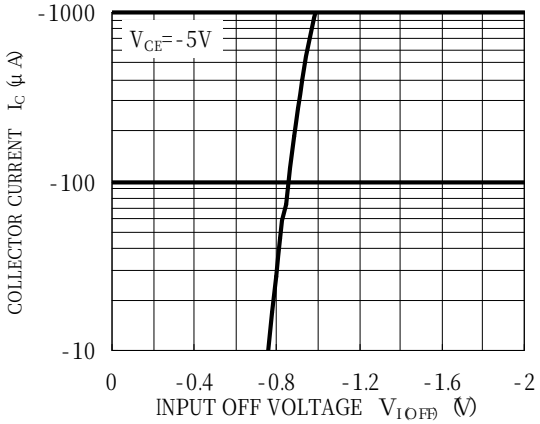
INPUT ON VOLTAGE
VS.COLLECTOR CURRENT



DC FORWARD CURRENT GAIN
VS.COLLECTOR CURRENT



COLLECTOR CURRENT
VS.INPUT OFF VOLTAGE



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