

RT1N432X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

RT1N432X is a one chip transistor with built-in bias resistor, PNP type is RT1P432X.

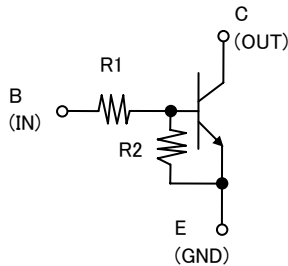
FEATURE

• Built-in bias resistor ($R_1=4.7k\Omega$, $R_2=10k\Omega$).

APPLICATION

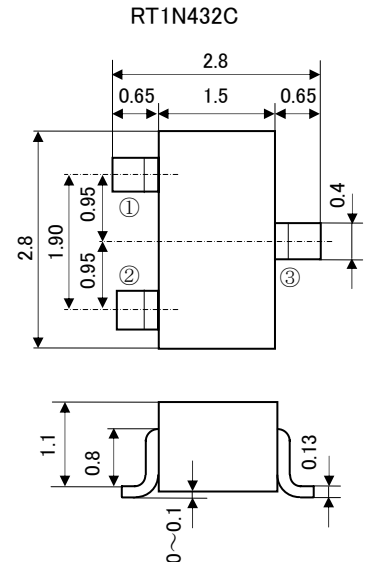
Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING

UNIT : mm



JEITA: SC-59

JEDEC: Similar to TO-236

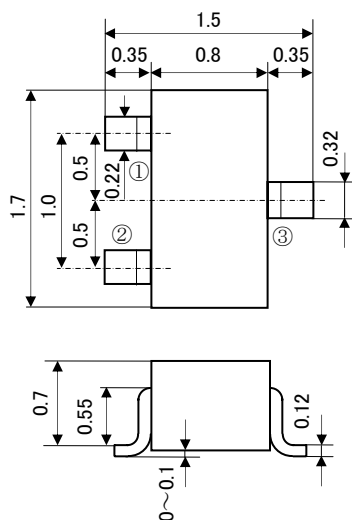
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N432U



JEITA: SC-75A

JEDEC: —

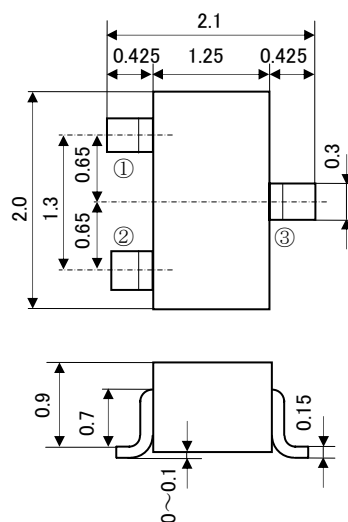
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N432M



JEITA: SC-70

JEDEC: —

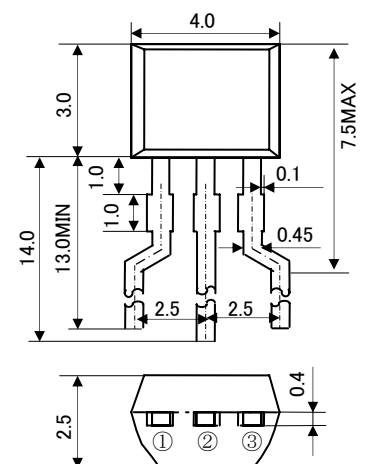
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1N432S



JEITA: —

JEDEC: —

Terminal Connector

①: Emitter

②: Collector

③: Base

RT1N432X SERIES

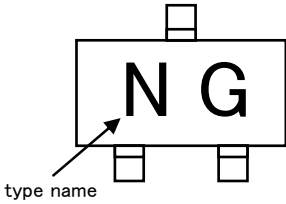
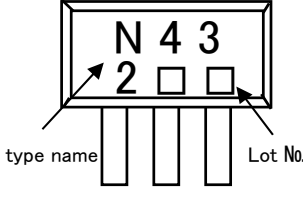
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MARKING

RT1N432C RT1N432M RT1N432U	RT1N432S
	

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N432U	RT1N432M	RT1N432C	RT1N432S	
V _{CBO}	Collector to Base voltage	50				V
V _{EBO}	Emitter to Base voltage	7				V
V _{CEO}	Collector to Emitter voltage	50				V
V _{IN}	Input voltage	20				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				°C
Tstg	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 breakdown 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
I_{EBO}	Emitter cut off current	$V_{EB}=5V, I_C=0$	255	340	493	μA
h_{FE}	DC forward current gain	$V_{CE}=5V, I_C=10mA$	30	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$	—	—	0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE}=0.2V, I_C=5mA$	—	1.0	1.8	V
$V_{I(OFF)}$	Input off voltage	$V_{CE}=5V, I_C=100\mu A$	0.5	0.8	—	V
R_1	Input resistor	—	3.3	4.7	6.1	k Ω
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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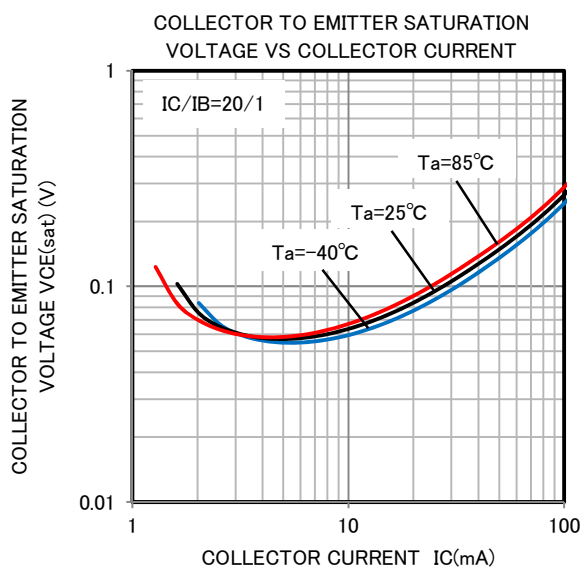
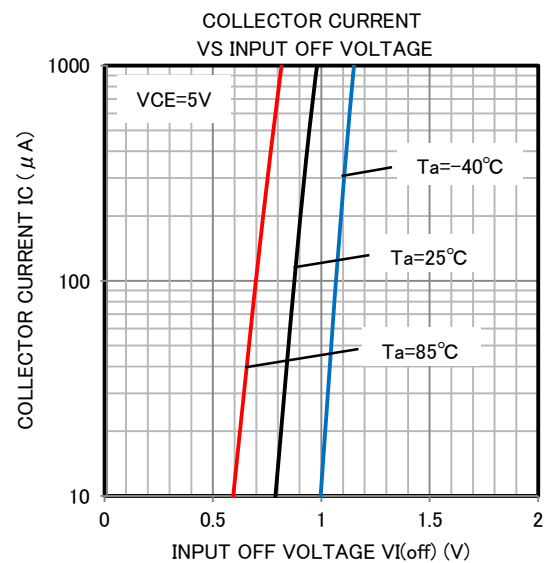
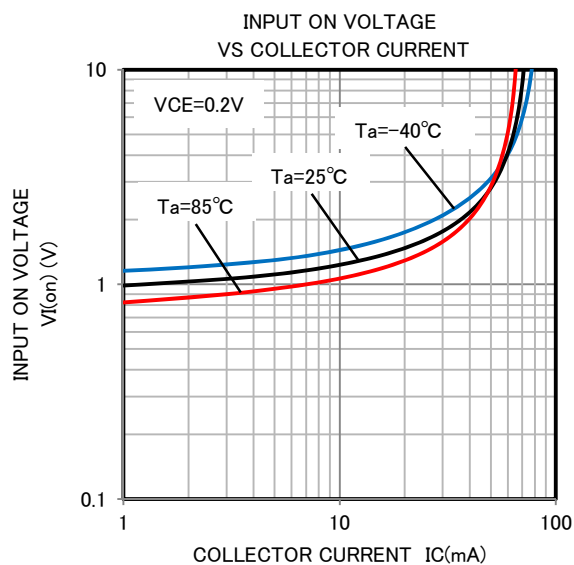
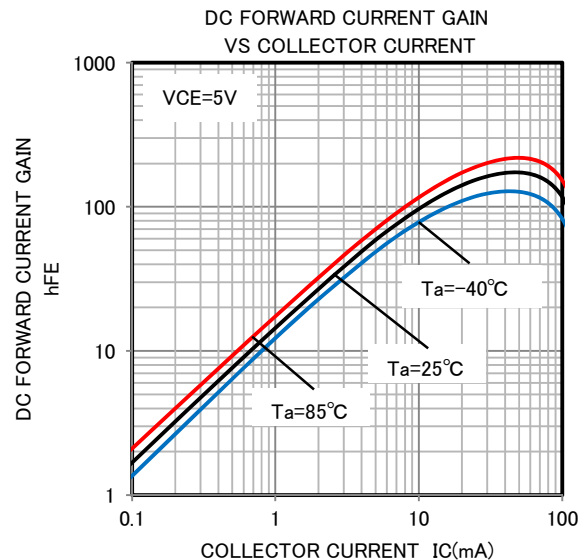
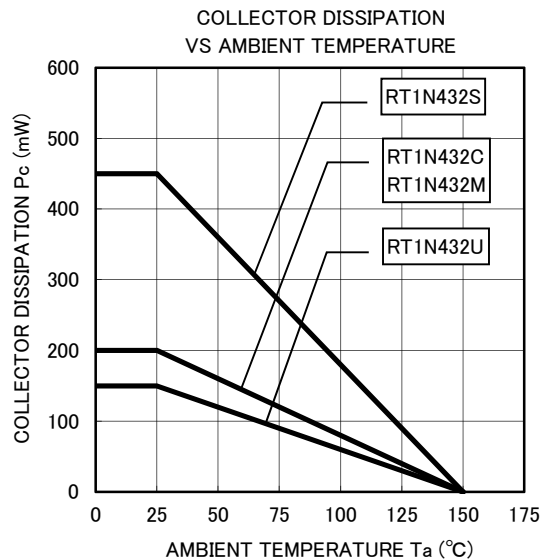
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TYPICAL CHARACTERISTICS





Keep safety first in your circuit designs!

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