

RT1P441X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

RT1P441X is a one chip transistor with built-in bias resistor, NPN type is RT1N441X.

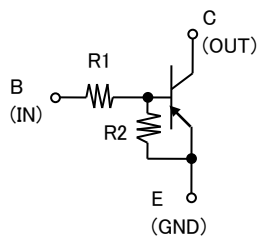
FEATURE

• Built-in bias resistor ($R1=47k\Omega$, $R2=47k\Omega$).

APPLICATION

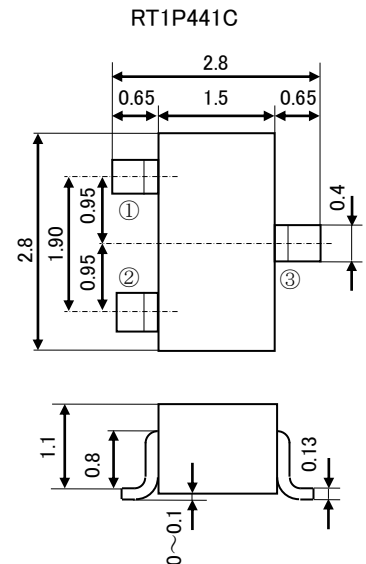
Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING

UNIT : mm



JEITA: SC-59

JEDEC: Similar to TO-236

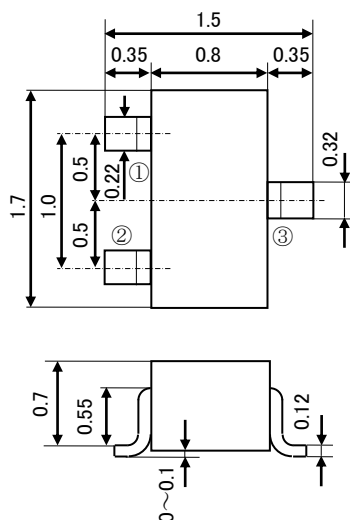
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1P441U



JEITA: SC-75A

JEDEC: —

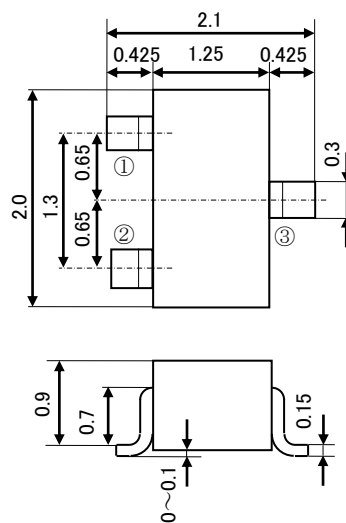
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1P441M



JEITA: SC-70

JEDEC: —

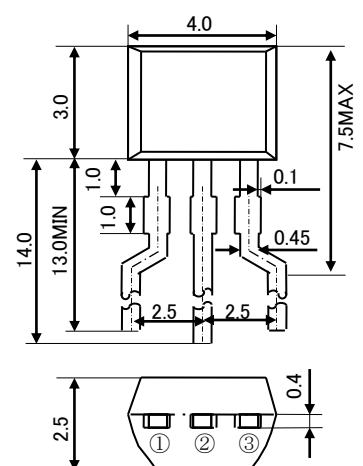
Terminal Connector

①: Base

②: Emitter

③: Collector

RT1P441S



JEITA: —

JEDEC: —

Terminal Connector

①: Emitter

②: Collector

③: Base

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MARKING

RT1P441C RT1P441M RT1P441U	RT1P441S

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1P441U	RT1P441M	RT1P441C	RT1P441S	
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	$I_C = -100 \mu A, R_{BE} = \infty$	-50	—	—	V
I_{CBO}	Collector cut off current	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB} = -5V, I_C = 0$	-41	-53	-76	μA
h_{FE}	DC forward current gain	$V_{CE} = -5V, I_C = -5mA$	50	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C = -10mA, I_B = -0.5mA$	—	-0.1	-0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE} = -0.2V, I_C = -5mA$	—	-2.2	-5.0	V
$V_{I(OFF)}$	Input off voltage	$V_{CE} = -5V, I_C = -100 \mu A$	-0.8	-1.1	—	V
R_1	Input resistor	—	33	47	61	k Ω
R_2/R_1	Resistor ratio	—	0.9	1.0	1.1	—
f_T	Gain band width product	$V_{CE} = -6V, I_E = 10mA$	—	150	—	MHz

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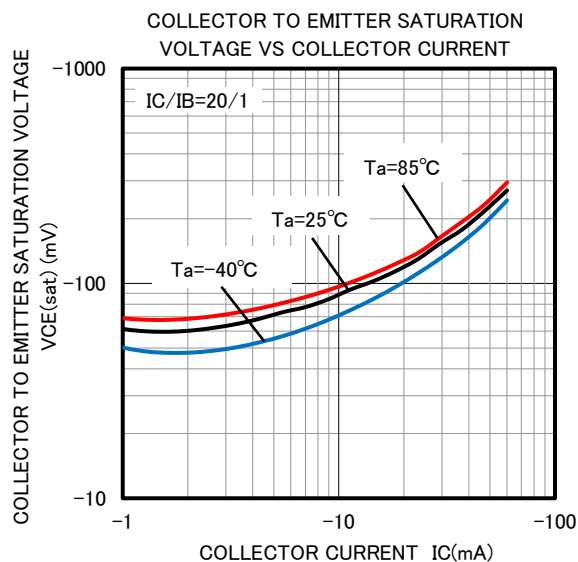
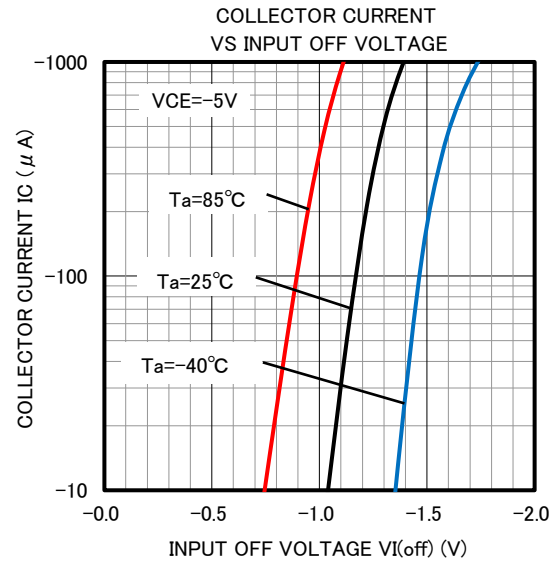
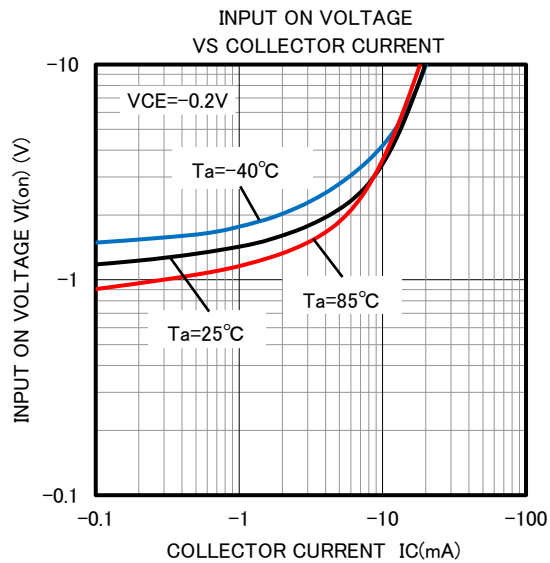
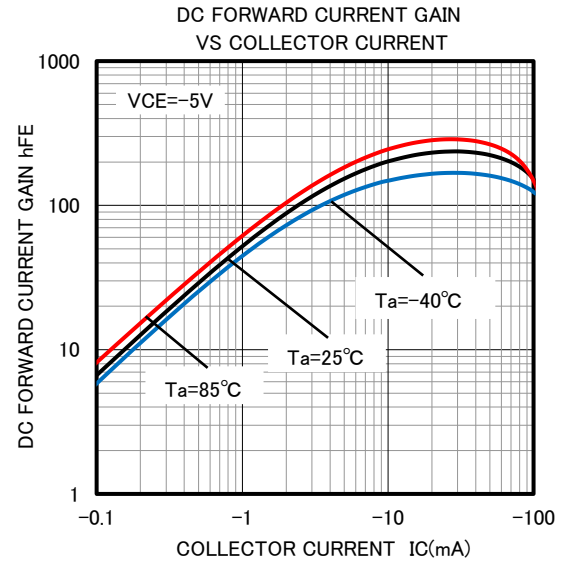
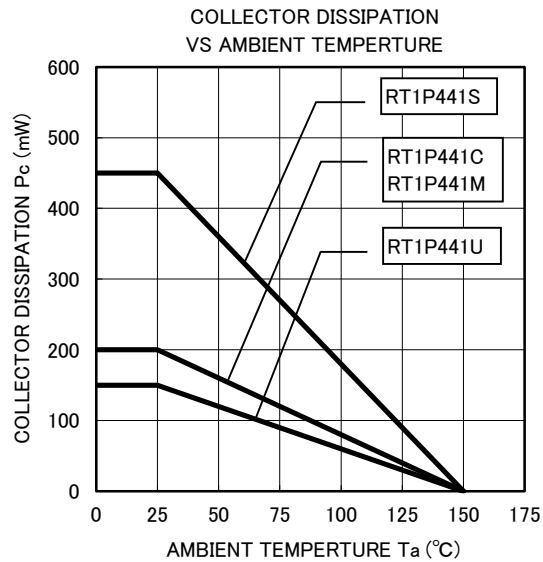
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TYPICAL CHARACTERISTICS



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