

RT1N440X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

RT1N440X is a one chip transistor with built-in bias resistor, PNP type is RT1P440X.

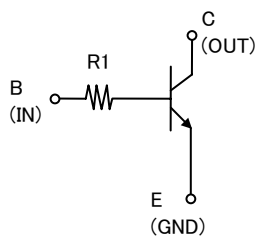
FEATURE

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

APPLICATION

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

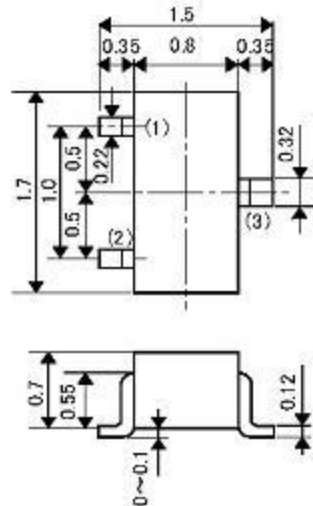
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

RT1N440U



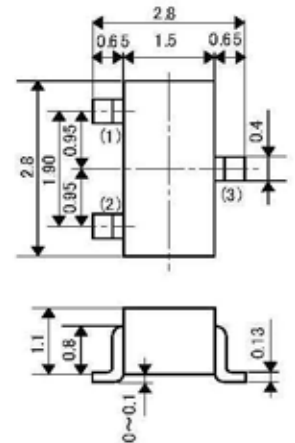
JEITA: —

JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1N440C



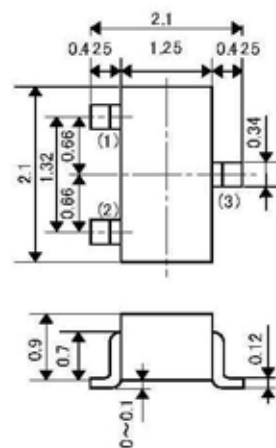
JEITA: SC-59

JEDEC: Similar to TO-236

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1N440M



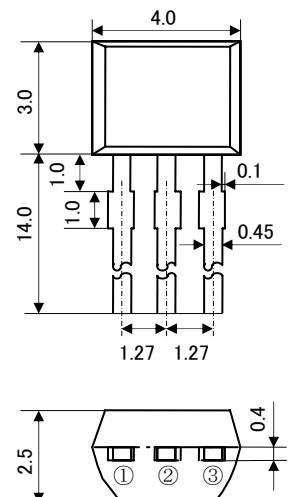
JEITA: SC-70

JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1N440S



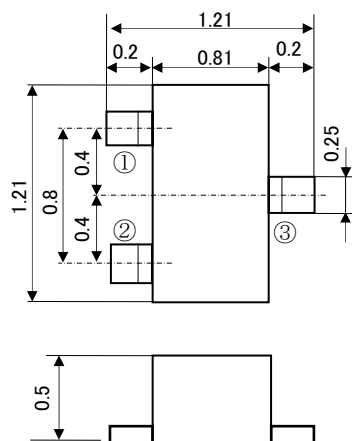
JEITA: —

JEDEC: —

Terminal Connector

- ①: Emitter
- ②: Collector
- ③: Base

RT1N440T2



JEITA, JEDEC: —

ISAHAYA: T-USM

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1N440X SERIES

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MAXIMUM RATING (Ta=25°C)

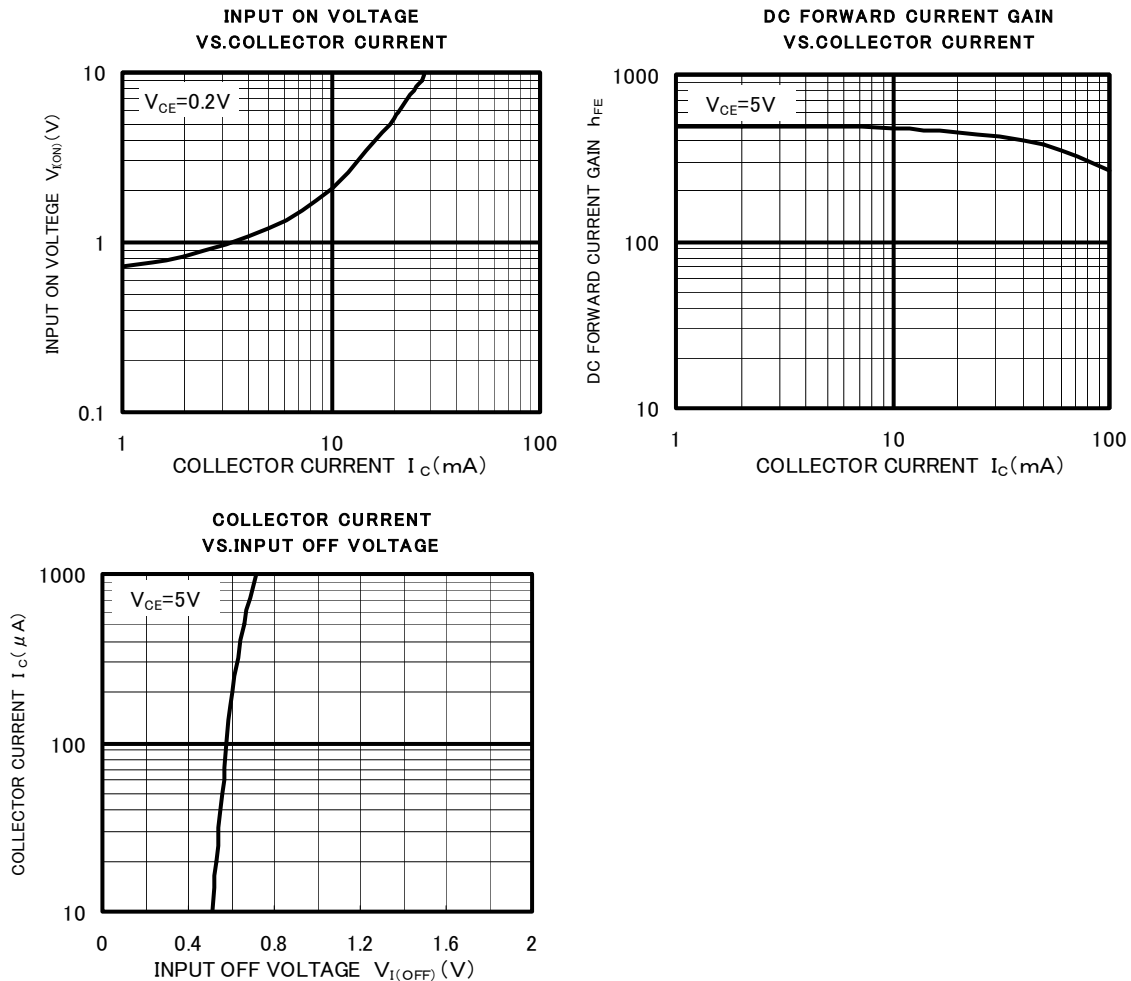
SYMBOL	PARAMETER	RATING					UNIT
		RT1N440T2	RT1N440U	RT1N440M	RT1N440C	RT1N440S	
V _{CBO}	Collector to Base voltage	50					V
V _{EBO}	Emitter to Base voltage	6					V
V _{CEO}	Collector to Emitter voltage	50					V
I _C	Collector current	100					mA
I _{CM}	Peak Collector current	200					mA
P _C	Collector dissipation(Ta=25°C)	(※)125	150	200		450	mW
T _j	Junction temperature	+125	+150				°C
T _{stg}	Storage temperature	-55~+125		-55~+150			°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

(※) package mounted on 9mm × 19mm × 1mm glass-epoxy substrate.

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
h_{FE}	DC forward current gain	$V_{CE}=5V, I_C=1mA$	100			—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$			0.3	V
R_1	Input resistance		33	47	61	$k\Omega$
f_T	Gain band width product	$V_{CE}=6V, I_E=-10mA$		200		MHz

TYPICAL CHARACTERISTICS





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