RT1N441X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

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

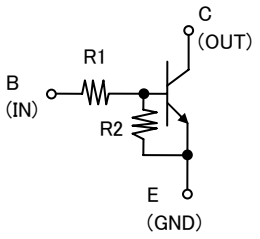
FEATURE

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

APPLICATION

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

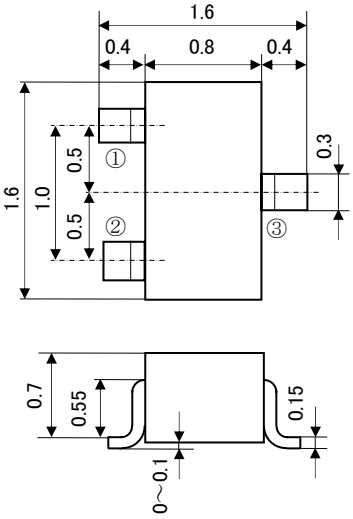
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

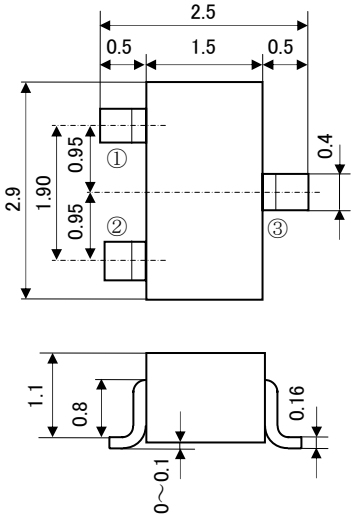
RT1N441U



JEITA : —
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

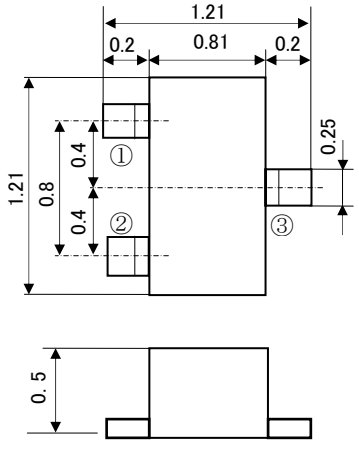
RT1N441C



JEITA : SC-59
JEDEC : Similar to TO-236

Terminal Connector
①:Base
②:Emitter
③:Collector

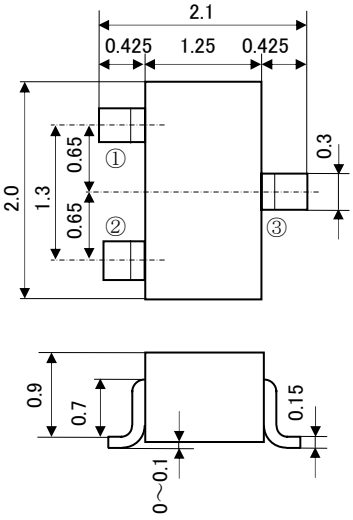
RT1N441T2



JEITA、JEDEC : -
ISAHAYA : T-USM

Terminal Connector
①:Base
②:Emitter
③:Collector

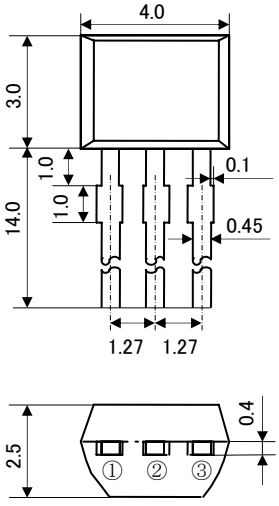
RT1N441M



JEITA : SC-70
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1N441S



JEITA : —
JEDEC : —

Terminal Connector
①:Emitter
②:Collector
③:Base

RT1N441X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

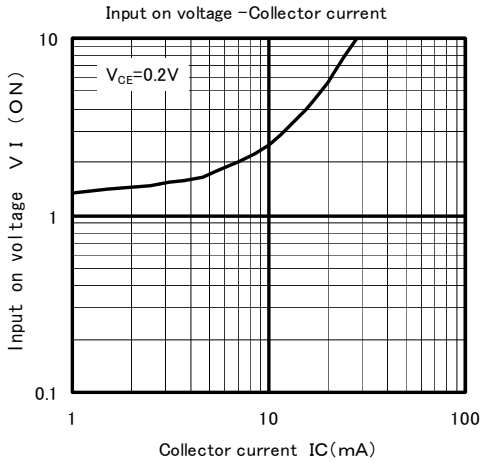
MAXIMUM RATING (Ta=25℃)

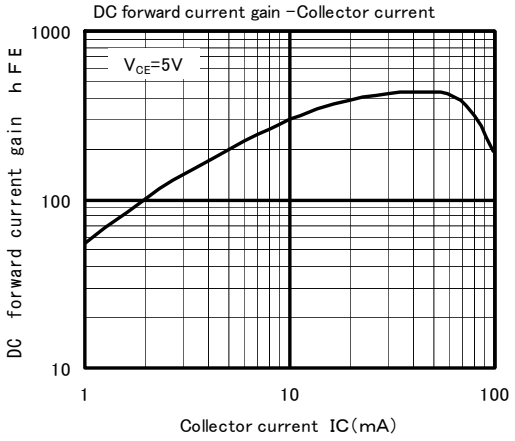
SYMBOL	PARAMETER	RATING					UNIT
		RT1N441T2	RT1N441U	RT1N441M	RT1N441C	RT1N441S	
V_{CBO}	Collector to Base voltage	50					V
V_{EBO}	Emitter to Base voltage	10					V
V_{CEO}	Collector to Emitter voltage	50					V
V_{IN}	Input voltage	40					V
I_C	Collector current	100					mA
I_{CM}	Peak Collector current	200					mA
P_C	Collector dissipation(Ta=25℃)	125(※)	150	200		450	mW
Tj	Junction temperature	+125	+150				℃
Tstg	Storage temperature	−55～+125	−55～+150				℃

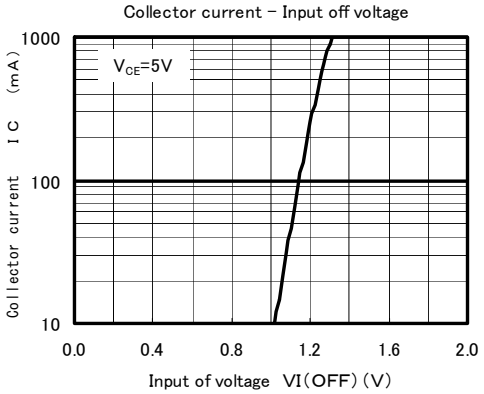
(※) package mounted on 9mm×19mm×1mm glass-epoxy substrate.

ELECTRICAL CHARACTERISTICS (Ta=25℃)

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	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		1.8	5.0	V
$V_{I(OFF)}$	Input off voltage	V_{CE}=5V, I_C=100μA	0.8	1.1		V
R_1	Input resistance		33	47	61	kΩ
R_2/R_1	Resistance ratio		0.9	1.0	1.1	
f_T	Gain band width product	V_{CE}=6V, I_E=−10mA		200		MHz







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