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.

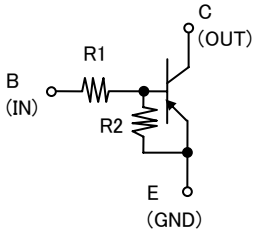
FEATURE

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

APPLICATION

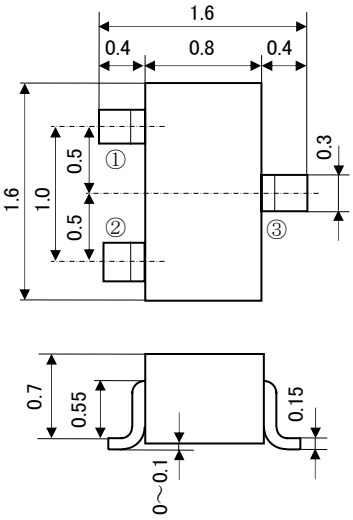
Inverted circuit,switching circuit,interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING UNIT:mm

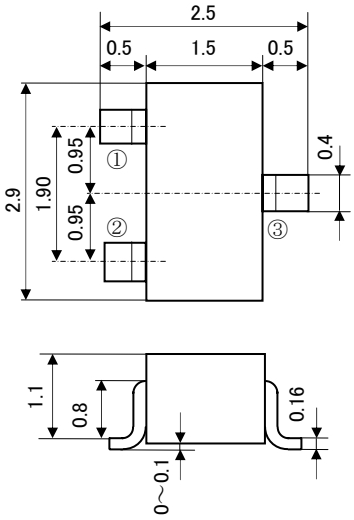
RT1P441U



JEITA:—
JEDEC:—

Terminal Connector
①:Base
②:Emitter
③:Collector

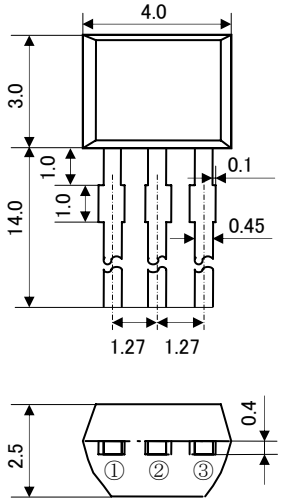
RT1P441C



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

Terminal Connector
①:Base
②:Emitter
③:Collector

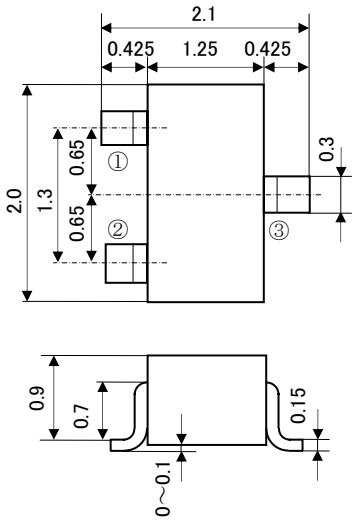
RT1P441S



JEITA:—
JEDEC:—

Terminal Connector
①:Emitter
②:Collector
③:Base

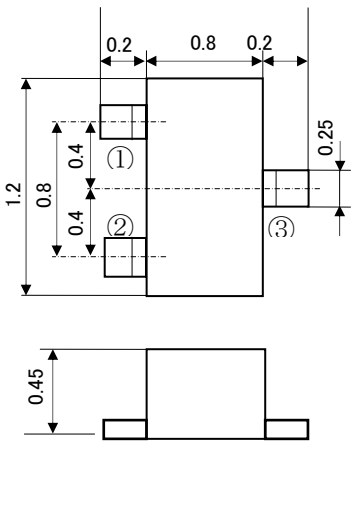
RT1P441M



JEITA:SC-70
JEDEC:—

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1P441T



JEITA:—
JEDEC:—

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1P441X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING					UNIT
		RT1P441T	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
I_C	Collector current	−100					mA
I_{CM}	Peak Collector current	−200					mA
P_C	Collector dissipation(Ta=25℃)	125(※)	125	150		450	mW
Tj	Junction temperature	+125		+150			℃
Tstg	Storage temperature	−55～+125		−55～+150			℃

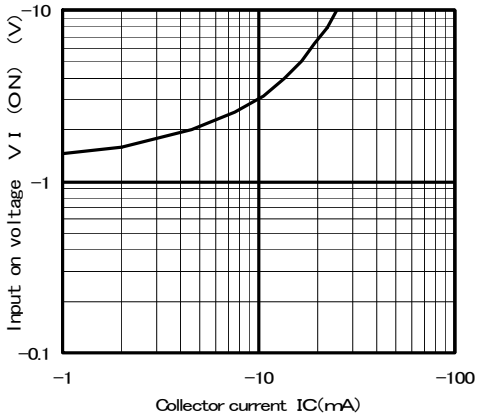
(※) package mounted on 9mm×19mm×1mm glass-epoxy substrate.

ELECTRICAL CHARACTERISTICS (Ta=25℃)

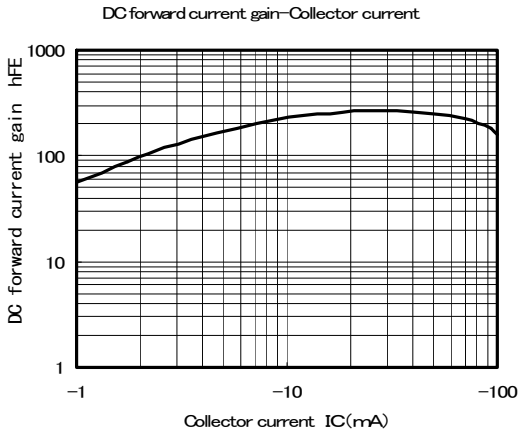
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	I_C=−100μA, R_{BE}=∞	−50			V
I_{CBO}	Collector cut off current	V_{CB}=−50V, I_E=0			−0.1	μA
h_{FE}	DC forward current gain	V_{CE}=−5V, I_C=−5mA	50			—
$V_{CE(sat)}$	C to E saturation voltage	I_C=−10mA, I_B=−0.5mA		−0.1	−0.3	V
$V_{I(ON)}$	Input on voltage	V_{CE}=−0.2V, I_C=−5mA		−2.3	−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		150		MHz

TYPICAL CHARACTERISTICS

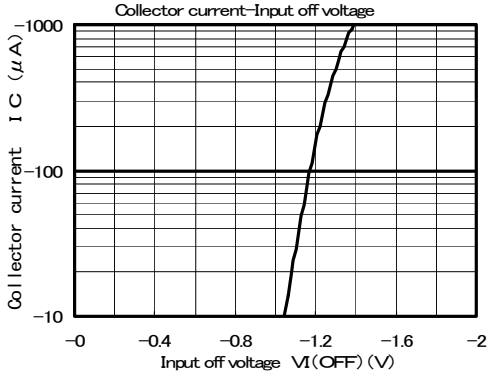
Input on voltage−Collector current



DC forward current gain−Collector current



Collector current−Input off voltage



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Jan.2003