RT1P44QX SERIES

〈Transistor〉

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

DESCRIPTION

RT1P44QX is a one chip transistor with built-in bias resistor,NPN type is RT1N44QX.

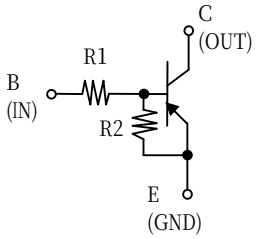
FEATURE

・Built-in bias resistor (R1=47kΩ,R2=10kΩ).

APPLICATION

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

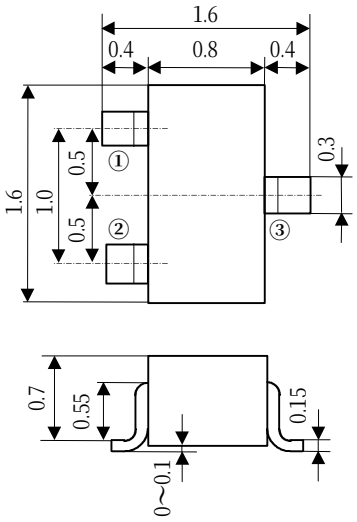
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

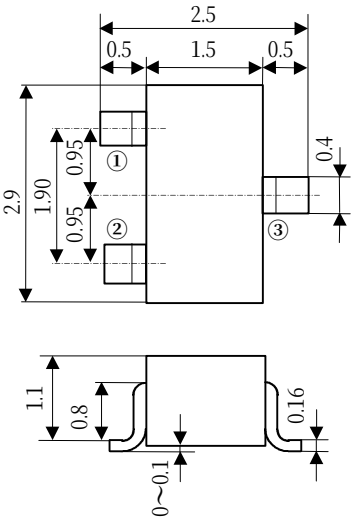
RT1P44QU



JEITA: —
JEDEC: —

Terminal Connector
①: Base
②: Emitter
③: Collector

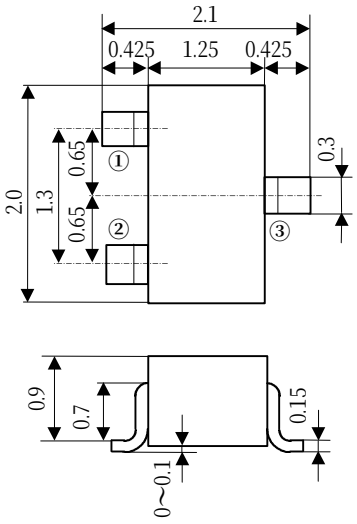
RT1P44QC



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

Terminal Connector
①: Base
②: Emitter
③: Collector

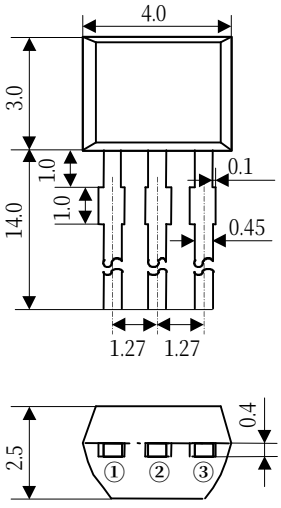
RT1P44QM



JEITA: SC-70
JEDEC: —

Terminal Connector
①: Base
②: Emitter
③: Collector

RT1P44QS



JEITA: —
JEDEC: —

Terminal Connector
①: Emitter
②: Collector
③: Base

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For Switching Application
Silicon PNP Epitaxial Type

MAXIMUM RATING (Ta=25℃)

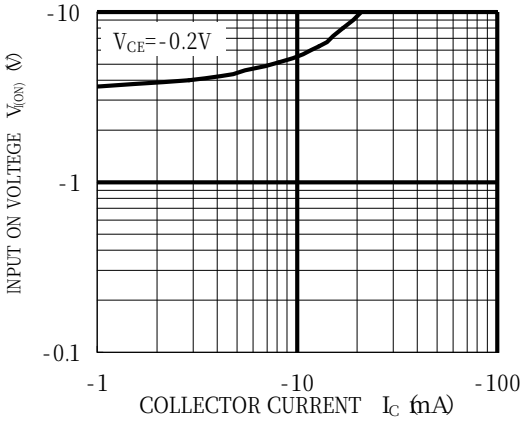
SYMBOL	PARAMETER	RATING				UNIT
		RT1P44QU	RT1P44QM	RT1P44QC	RT1P44QS	
V_{CBO}	Collector to Base voltage	-50				V
V_{EBO}	Emitter to Base voltage	-15				V
V_{CEO}	Collector to Emitter voltage	-50				V
I_C	Collector current	-100				mA
I_{CM}	Peak Collector current	-200				mA
P_C	Collector dissipation(Ta=25°C)	150	200		450	mW
Tj	Junction temperature	+150	+150			℃
Tstg	Storage temperature	-55～+150	-55～+150			℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

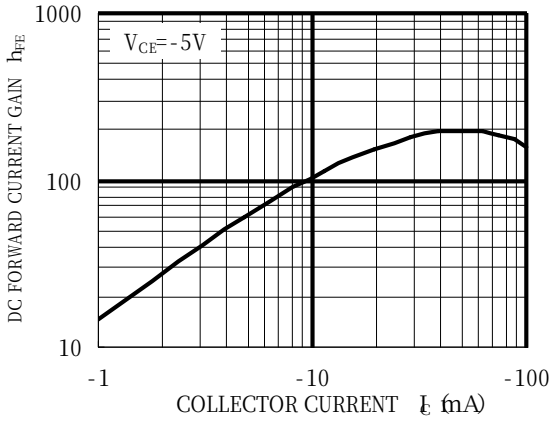
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	I_C=-100μA, R_{BE}=∞	-50			V
I_{CBO}	Collector cut off current	V_{CB}=-50V, I_E=0			-0.1	μA
h_{FE}	DC forward current gain	V_{CE}=-5V, I_C=-5mA	33			—
$V_{CE(sat)}$	C to E saturation voltage	I_C=-10mA, I_B=-0.5mA			-0.3	V
$V_{I(ON)}$	Input on voltage	V_{CE}=-0.2V, I_C=-5mA		-4.2	-8.9	V
$V_{I(OFF)}$	Input off voltage	V_{CE}=-5V, I_C=-100μA	-2.3	-3.1		V
R_1	Input resistance		33	47	61	kΩ
R_2/R_1	Resistance ratio		0.17	0.21	0.26	
f_T	Gain band width product	V_{CE}=-6V, I_E=10mA		150		MHz

TYPICAL CHARACTERISTICS

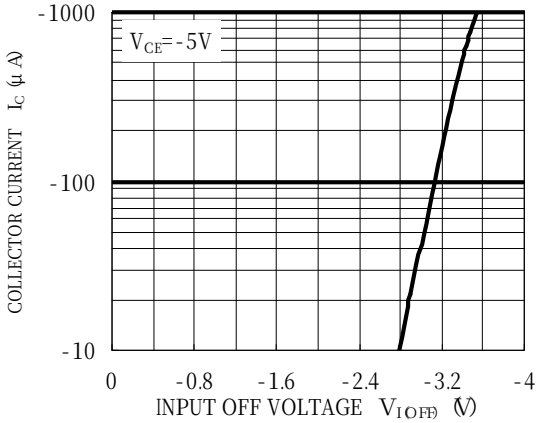
INPUT ON VOLTAGE VS.COLLECTOR CURRENT



DC FORWARD CURRENT GAIN VS.COLLECTOR CURRENT



COLLECTOR CURRENT VS.INPUT OFF VOLTAGE



ISAHAYA ELECTRONICS CORPORATION

Marketing division, Marketing planning department

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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