

RT1P141X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

RT1P141X is a one chip transistor with built-in bias resistor, NPN type is RT1N141X.

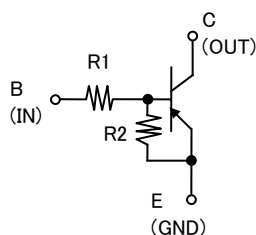
FEATURE

- Built-in bias resistor ($R1=10k\Omega$, $R2=10k\Omega$).

APPLICATION

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

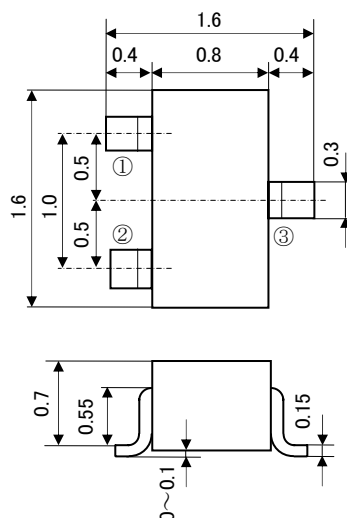
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

RT1P141U



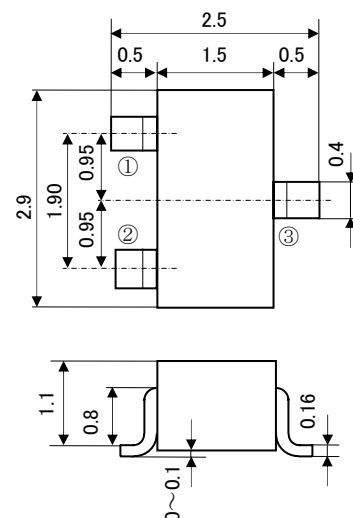
JEITA: —

JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1P141C



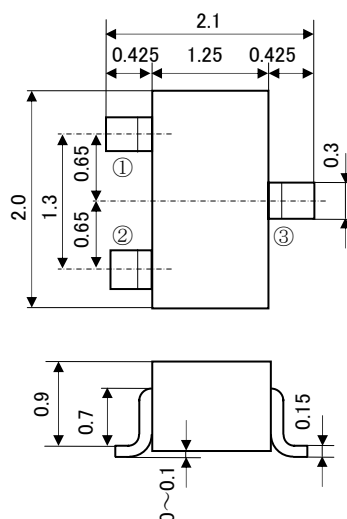
JEITA: SC-59

JEDEC: Similar to TO-236

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1P141M



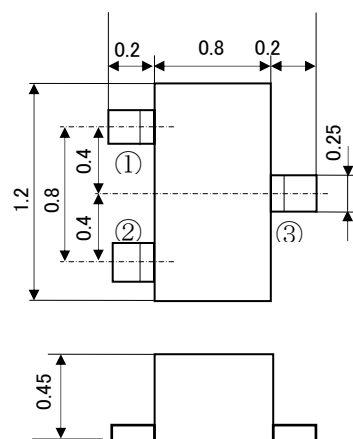
JEITA: SC-70

JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1P141T



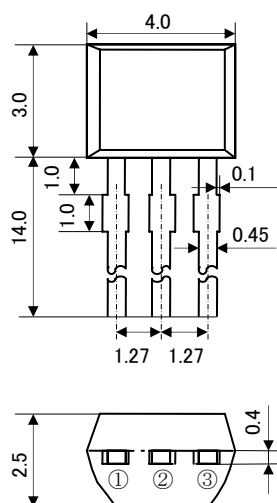
JEITA: —

JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

RT1P141S



JEITA: —

JEDEC: —

- ①: Emitter
- ②: Collector
- ③: Base

RT1P141X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING					UNIT
		RT1P141T	RT1P141U	RT1P141M	RT1P141C	RT1P141S	
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°C)	125(※)	125	150		450	mW
T_j	Junction temperature	+125		+150			°C
T_{stg}	Storage temperature	-55~+125		-55~+150			°C

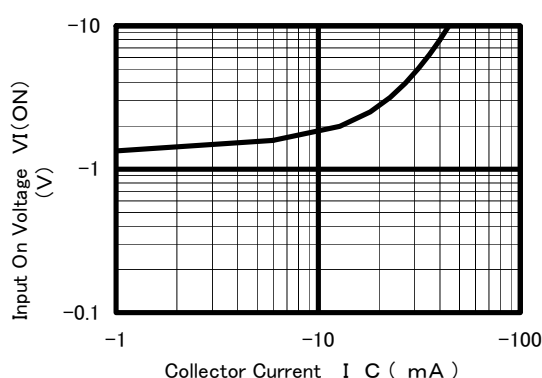
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

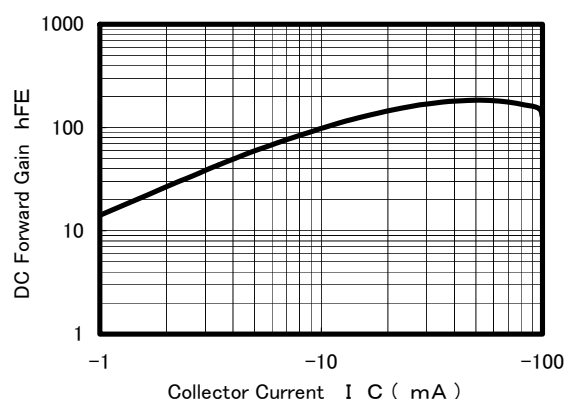
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A$, $R_{BE} = \infty$	-50			V
I_{CBO}	Collector cut off current	$V_{CB} = -50V$, $I_E = 0$			-0.1	μA
h_{FE}	DC forward current gain	$V_{CE} = -5V$, $I_C = -10mA$	50			—
$V_{CE(sat)}$	C to E saturation voltage	$I_C = -10mA$, $I_B = -0.5mA$		-0.1	-0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE} = -0.2V$, $I_C = -5mA$		-1.5	-3.0	V
$V_{I(OFF)}$	Input off voltage	$V_{CE} = -5V$, $I_C = -100 \mu A$	-0.8	-1.1		V
R_1	Input resistance		7.0	10	13	k Ω
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

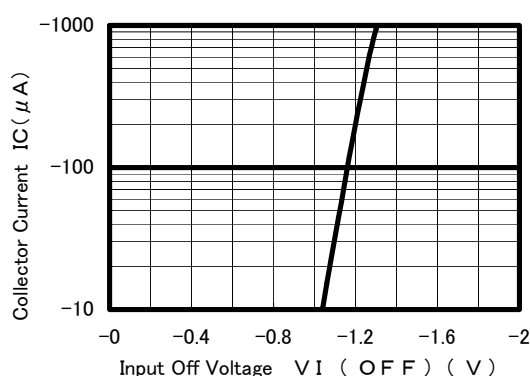
Input On Voltage – Collector Current



DC Forward Gain – Collector Current



Collector Current – Input Off Voltage





Marketing division, Marketing planning department

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

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