

# RT1P141X SERIES

<Transistor>

Transistor With Resistor  
For Switching Application  
Silicon PNP Epitaxial Type

## DESCRIPTION

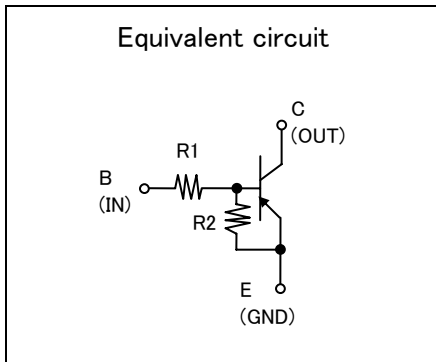
RT1P141X is a one chip transistor with built-in bias resistor, NPN type is RT1N141X.

## FEATURE

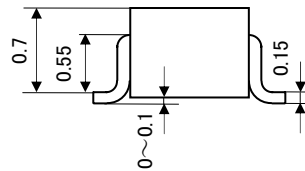
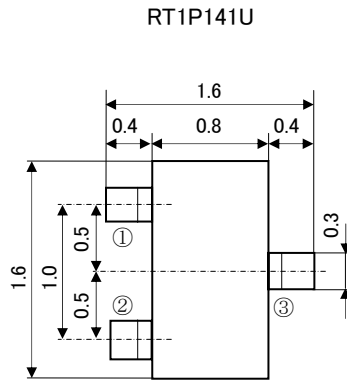
- Built-in bias resistor (R1=10kΩ, R2=10kΩ).

## APPLICATION

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



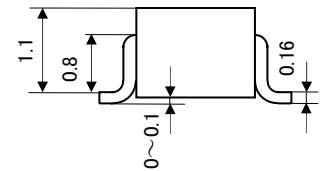
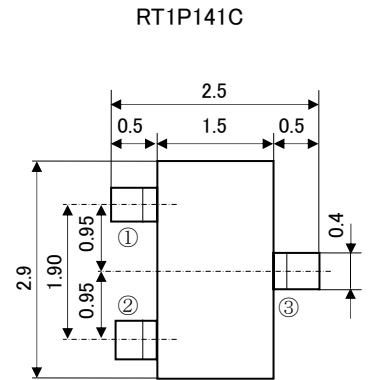
## OUTLINE DRAWING UNIT : mm



JEITA: —  
JEDEC: —

Terminal Connector

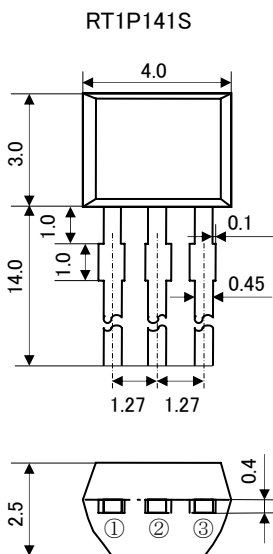
- ①: Base
- ②: Emitter
- ③: Collector



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

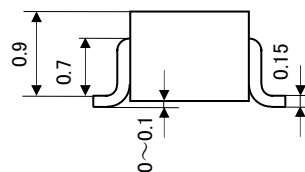
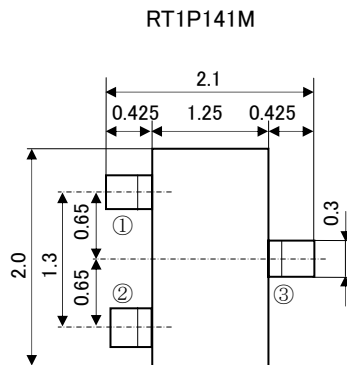
Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector



JEITA: —  
JEDEC: —

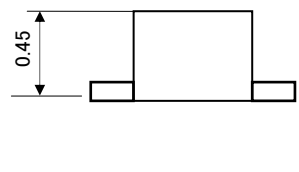
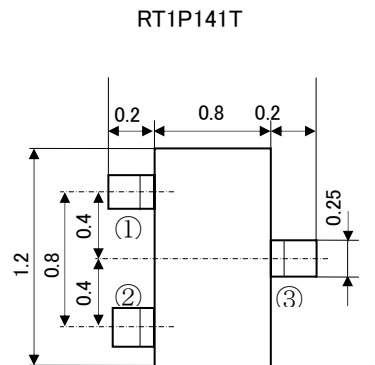
- ①: Emitter
- ②: Collector
- ③: Base



JEITA: SC-70  
JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector



JEITA: —  
JEDEC: —

Terminal Connector

- ①: Base
- ②: Emitter
- ③: Collector

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## 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

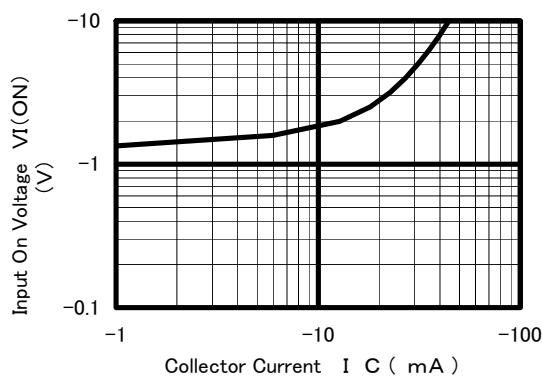
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

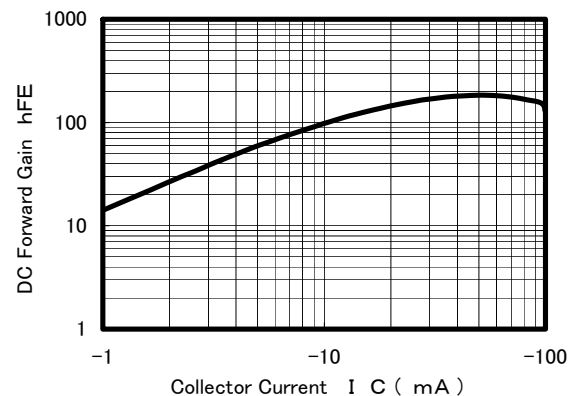
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A, R_{BE} = \infty$	-50			V
$I_{CBO}$	Collector cut off current	$V_{CB} = -50V, I_E = 0$			-0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE} = -5V, I_C = -10mA$	50			—
$V_{CE(sat)}$	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 $\Omega$
$R_2/R_1$	Resistance ratio		0.9	1.0	1.1	
$f_T$	Gain band width product	$V_{CE} = -6V, I_E = 10mA$		150		MHz

## TYPICAL CHARACTERISTICS

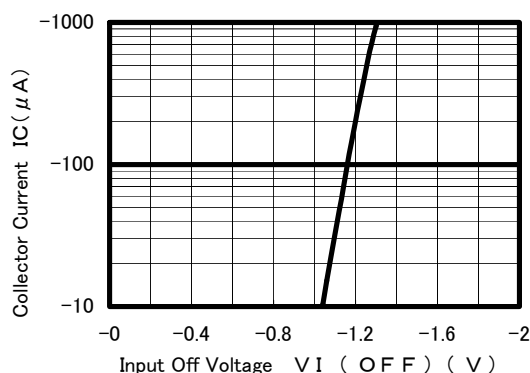
Input On Voltage - Collector Current



DC Forward Gain - Collector Current



Collector Current - Input Off Voltage





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