

# RT1P144X SERIES

Transistor

Transistor With Resistor  
For Switching Application  
Silicon PNP Epitaxial Type

## DESCRIPTION

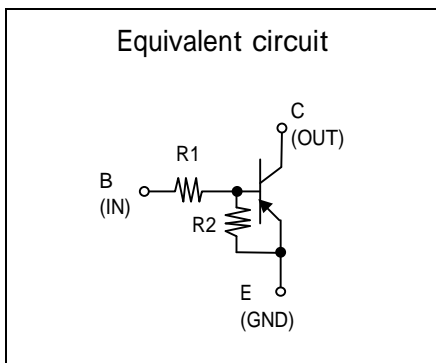
RT1P144X is a one chip transistor with built-in bias resistor, NPN type is RT1N144X.

## FEATURE

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

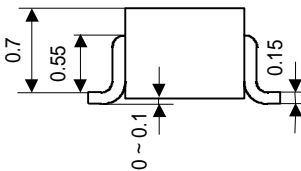
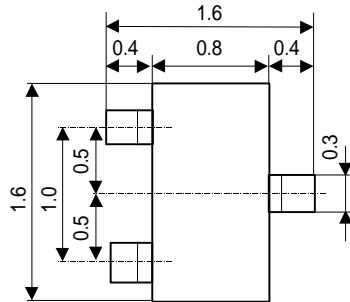
## APPLICATION

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



## OUTLINE DRAWING UNIT: mm

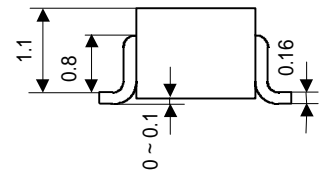
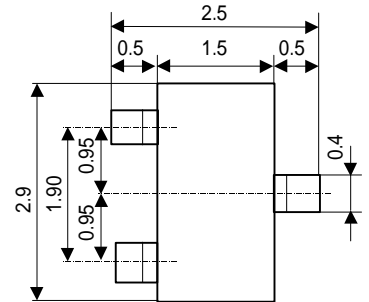
RT1P144U



JEITA: -  
JEDEC: -

Terminal Connector  
: Base  
: Emitter  
: Collector

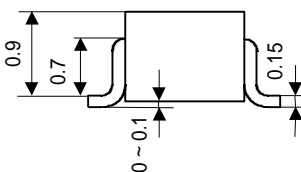
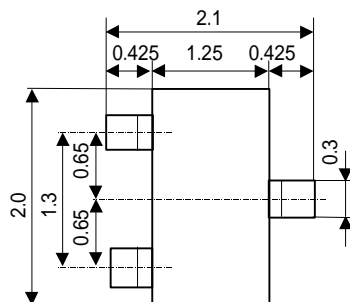
RT1P144C



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

Terminal Connector  
: Base  
: Emitter  
: Collector

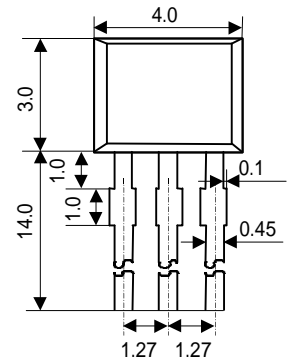
RT1P144M



JEITA: SC-70  
JEDEC: -

Terminal Connector  
: Base  
: Emitter  
: Collector

RT1P144S



JEITA: -  
JEDEC: -

Terminal Connector  
: Emitter  
: Collector  
: Base

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## MAXIMUM RATING (Ta=25 )

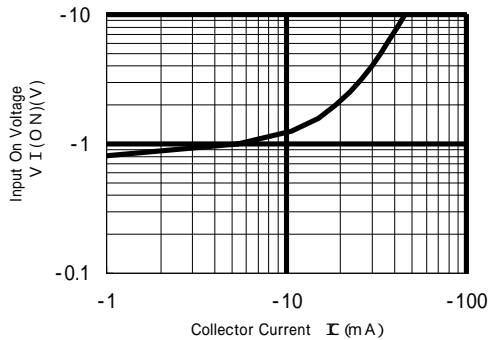
SYMBOL	PARAMETER	RATING				UNIT
		RT1P144U	RT1P144M	RT1P144C	RT1P144S	
$V_{CBO}$	Collector to Base voltage	-50				V
$V_{EBO}$	Emitter to Base voltage	-6				V
$V_{CEO}$	Collector to Emitter voltage	-50				V
$I_C$	Collector current	-100				mA
$I_{CM}$	Peak Collector current	-200				mA
$P_C$	Collector dissipation(Ta=25 )	150	200	450	mW	
$T_j$	Junction temperature	+150	+150			
$T_{stg}$	Storage temperature	-55 ~ +150		-55 ~ +150		

## ELECTRICAL CHARACTERISTICS (Ta=25 )

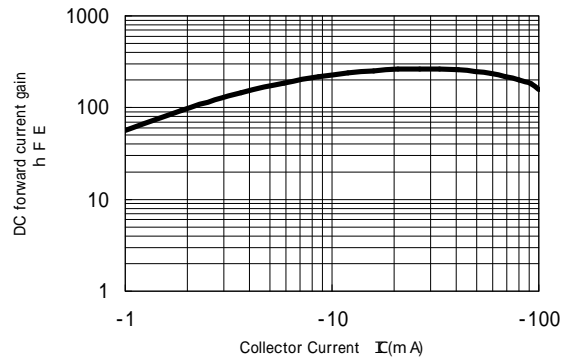
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A, R_{BE} =$	-50			V
$I_{CBO}$	Collector cut off current	$V_{CB} = -50V, I_E = 0$			-0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE} = -5V, I_C = -5mA$	50			-
$V_{CE(sat)}$	C to E saturation voltage	$I_C = -10mA, I_B = -0.5mA$		-0.1	-0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE} = -0.2V, I_C = -5mA$		-1.2	-1.8	V
$V_{I(OFF)}$	Input off voltage	$V_{CE} = -5V, I_C = -100 \mu A$	-0.4	-0.7		V
$R_1$	Input resistance		7	10	13	k
$R_2 / R_1$	Resistance ratio		4.2	4.7	5.1	
$f_T$	Gain band width product	$V_{CE} = -6V, I_E = 10mA$		150		MHz

## TYPICAL CHARACTERISTICS

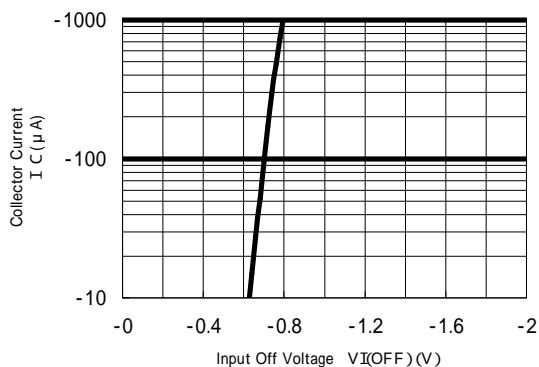
Input On Voltage - Collector Current



DC forward current gain-Collector Current



Collector Current - Input Off Voltage





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