

RT1P144X SERIES

Transistor

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

DESCRIPTION

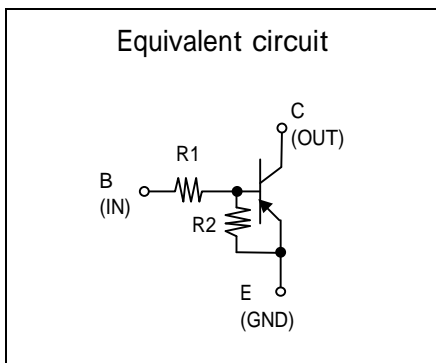
RT1P144X is a one chip transistor with built-in bias resistor, NPN type is RT1N144X.

FEATURE

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

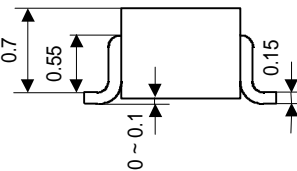
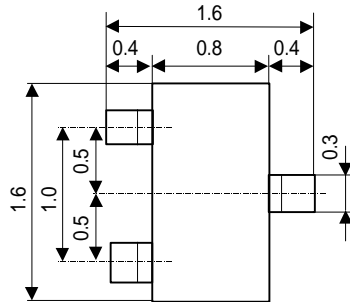
APPLICATION

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



OUTLINE DRAWING UNIT: mm

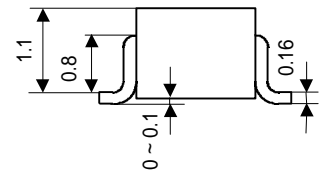
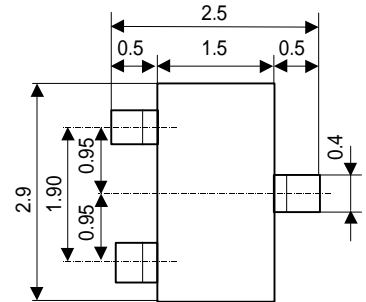
RT1P144U



JEITA: -
JEDEC: -

Terminal Connector
: Base
: Emitter
: Collector

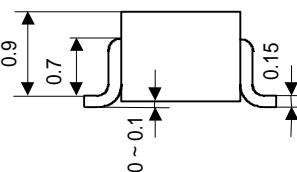
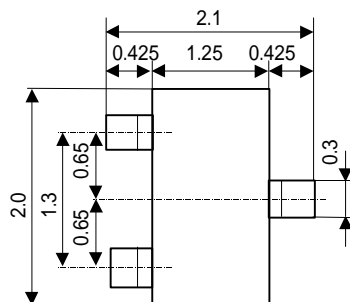
RT1P144C



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

Terminal Connector
: Base
: Emitter
: Collector

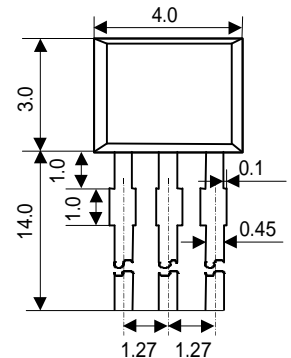
RT1P144M



JEITA: SC-70
JEDEC: -

Terminal Connector
: Base
: Emitter
: Collector

RT1P144S



JEITA: -
JEDEC: -

Terminal Connector
: Emitter
: Collector
: Base

RT1P144X SERIES

Transistor

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

MAXIMUM RATING (Ta=25)

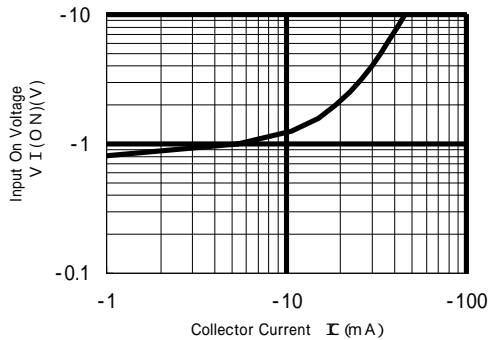
SYMBOL	PARAMETER	RATING				UNIT
		RT1P144U	RT1P144M	RT1P144C	RT1P144S	
V_{CBO}	Collector to Base voltage	-50				V
V_{EBO}	Emitter to Base voltage	-6				V
V_{CEO}	Collector to Emitter voltage	-50				V
I_C	Collector current	-100				mA
I_{CM}	Peak Collector current	-200				mA
P_C	Collector dissipation(Ta=25)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

ELECTRICAL CHARACTERISTICS (Ta=25)

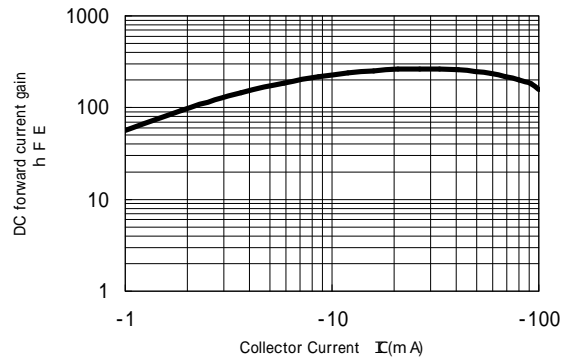
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A, R_{BE} =$	-50			V
I_{CBO}	Collector cut off current	$V_{CB} = -50V, I_E = 0$			-0.1	μA
h_{FE}	DC forward current gain	$V_{CE} = -5V, I_C = -5mA$	50			-
$V_{CE(sat)}$	C to E saturation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

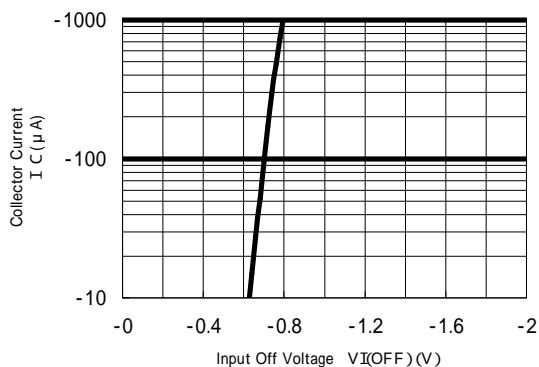
Input On Voltage - Collector Current



DC forward current gain-Collector Current



Collector Current - Input Off Voltage





Marketing division, Marketing planning department

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

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