

RT1N136X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon NPN Epitaxial Type

DESCRIPTION

RT1N136X is a one chip transistor with built-in bias resistor, PNP type is RT1P136X.

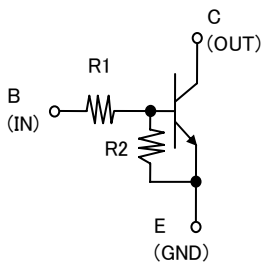
FEATURE

• Built-in bias resistor ($R1=1k\Omega$, $R2=10k\Omega$).

APPLICATION

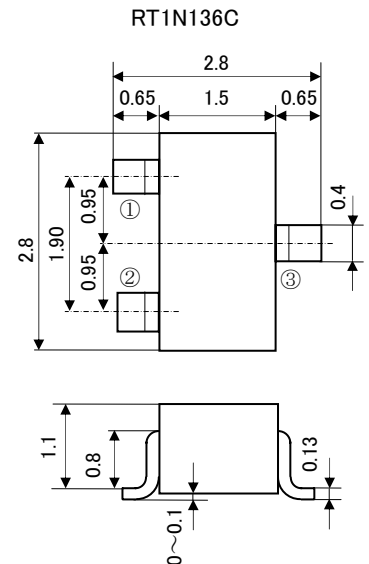
Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



OUTLINE DRAWING

UNIT : mm



JEITA : SC-59

JEDEC : Similar to TO-236

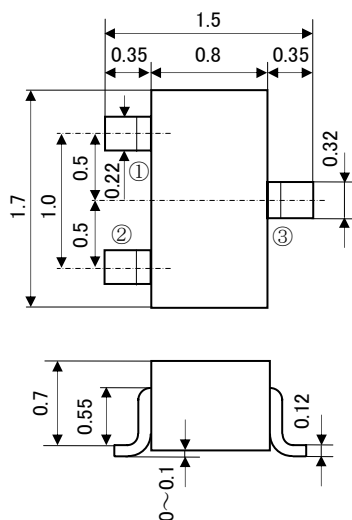
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N136U



JEITA : SC-75A

JEDEC : —

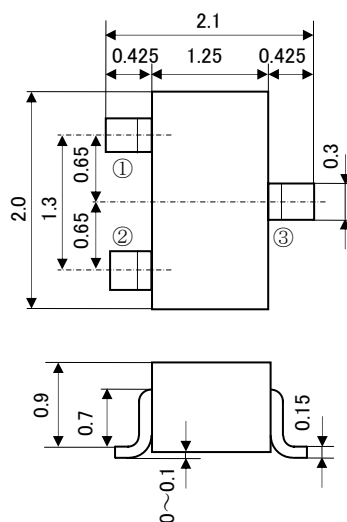
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N136M



JEITA : SC-70

JEDEC : —

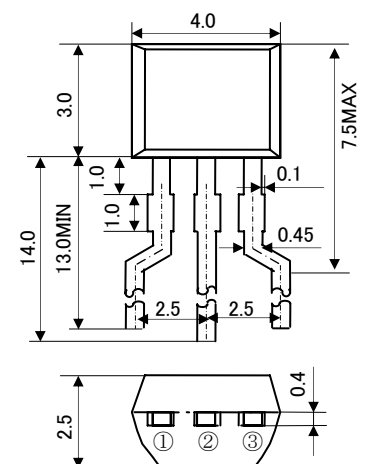
Terminal Connector

① : Base

② : Emitter

③ : Collector

RT1N136S



JEITA : —

JEDEC : —

Terminal Connector

① : Emitter

② : Collector

③ : Base

RT1N136X SERIES

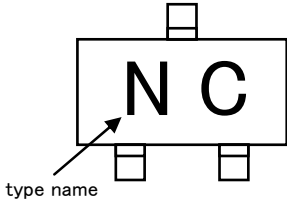
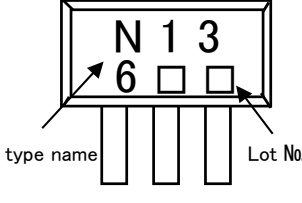
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MARKING

RT1N136C RT1N136M RT1N136U	RT1N136S
	

MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N136U	RT1N136M	RT1N136C	RT1N136S	
V _{CBO}	Collector to Base voltage	50				V
V _{EBO}	Emitter to Base voltage	6				V
V _{CEO}	Collector to Emitter voltage	50				V
V _{IN}	Input voltage	10				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
T _j	Junction temperature	+150				°C
T _{stg}	Storage temperature	-55~+150				°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

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
I_{EBO}	Emitter cut off current	$V_{EB}=5V, I_C=0$	332	443	642	μA
h_{FE}	DC forward current gain	$V_{CE}=5V, I_C=5mA$	33	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$	—	0.1	0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE}=0.2V, I_C=5mA$	—	0.7	1.2	V
$V_{I(OFF)}$	Input off voltage	$V_{CE}=5V, I_C=100\mu A$	0.4	0.6	—	V
R_1	Input resistor	—	0.7	1.0	1.3	k Ω
R_2/R_1	Resistor ratio	—	8	10	12	—
f_T	Gain band width product	$V_{CE}=6V, I_E=-10mA$	—	200	—	MHz

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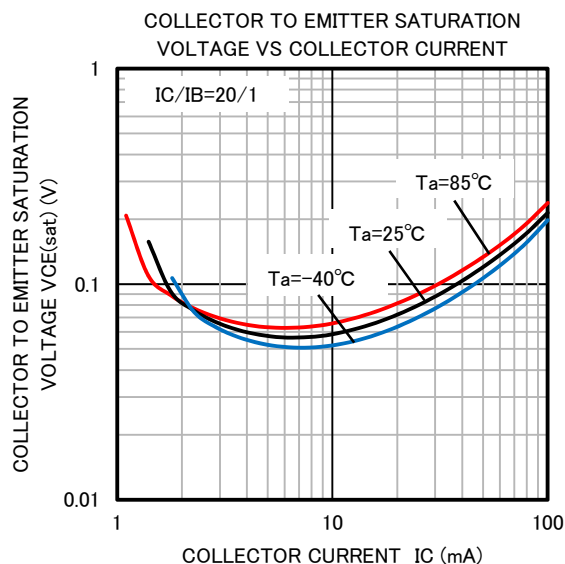
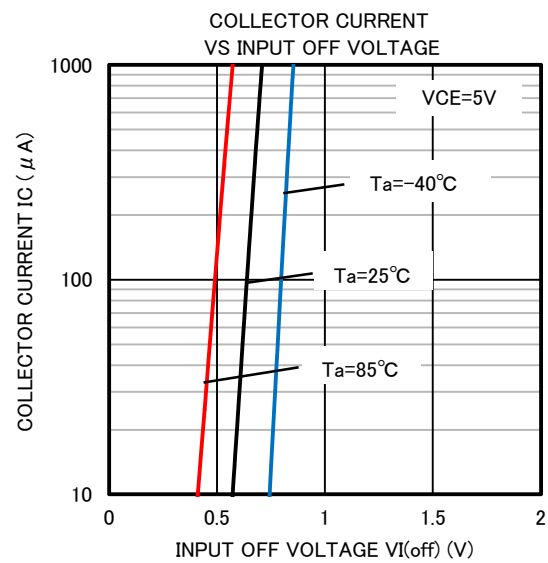
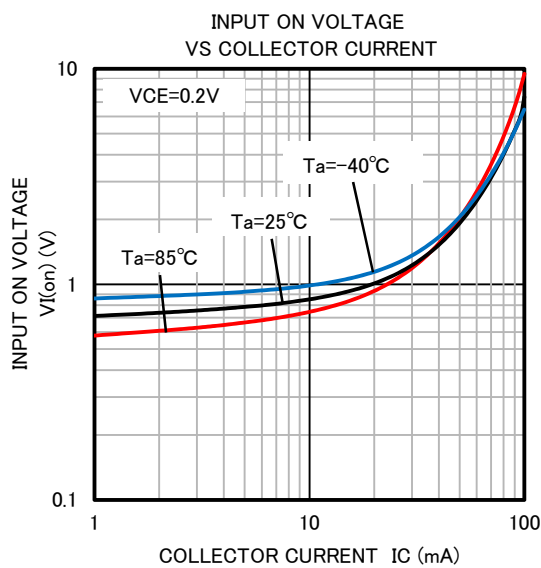
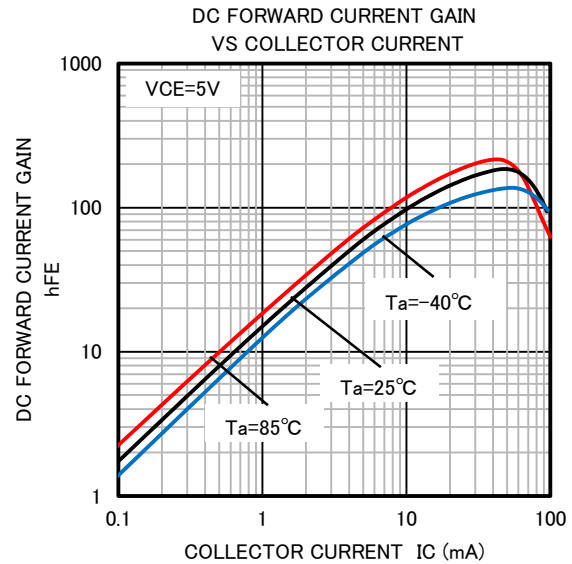
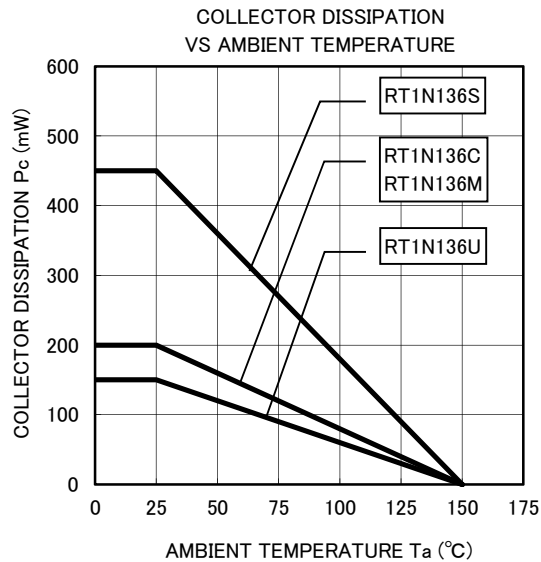
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TYPICAL CHARACTERISTICS





Keep safety first in your circuit designs!

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