RT1P136X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

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

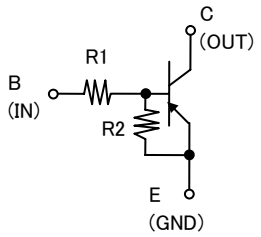
FEATURE

・Built-in bias resistor (R1=1kΩ,R2=10kΩ).

APPLICATION

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

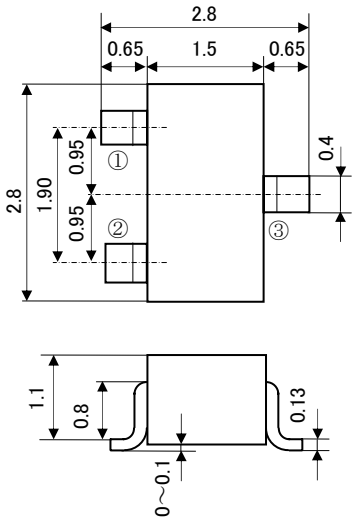
Equivalent circuit



OUTLINE DRAWING

UNIT : mm

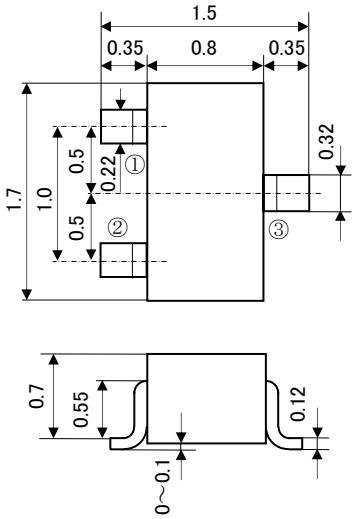
RT1P136C



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

Terminal Connector
①:Base
②:Emitter
③:Collector

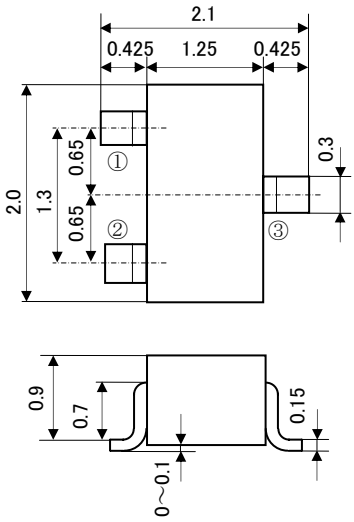
RT1P136U



JEITA : SC-75A
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

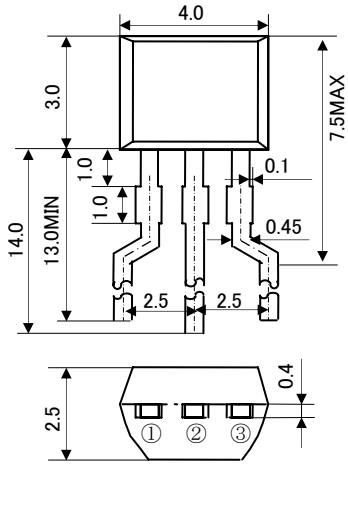
RT1P136M



JEITA : SC-70
JEDEC : —

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1P136S



JEITA : —
JEDEC : —

Terminal Connector
①:Emitter
②:Collector
③:Base

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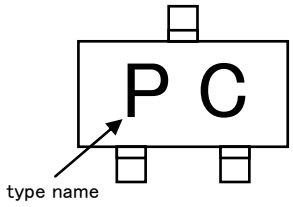
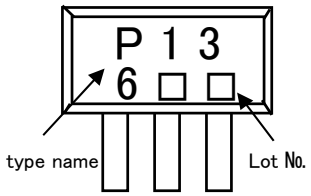
MARKING

RT1P136C RT1P136M RT1P136U	RT1P136S
	

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING				UNIT
		RT1P136U	RT1P136M	RT1P136C	RT1P136S	
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℃)	150	200		450	mW
Tj	Junction temperature	+150				℃
Tstg	Storage temperature	−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=−100μA, R_{BE}=∞	−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	—	—	−0.3	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=−100μA	−0.4	−0.6	—	V
R_1	Input resistor	—	0.7	1.0	1.3	kΩ
R_2/R_1	Resistor ratio	—	8	10	12	—
f_T	Gain band width product	V_{CE}=−6V, I_E=10mA	—	150	—	MHz

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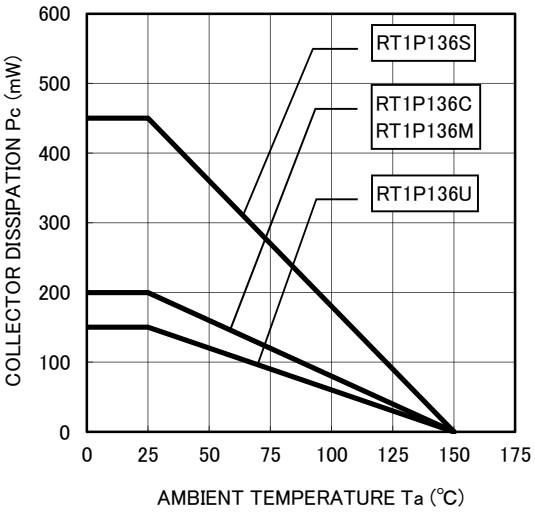
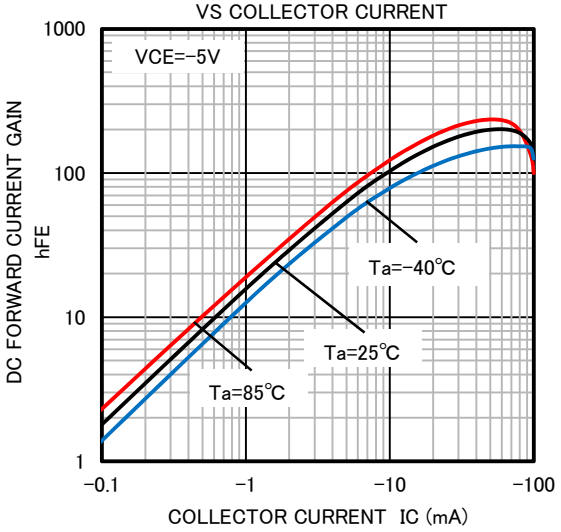
TYPICAL CHARACTERISTIC

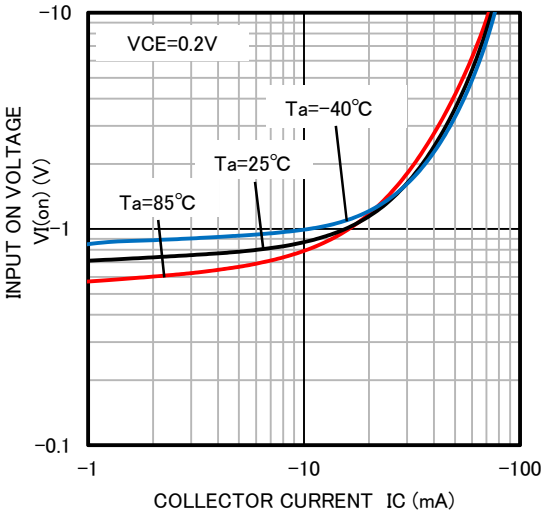
COLLECTOR DISSIPATION VS AMBIENT TEMPERATURE



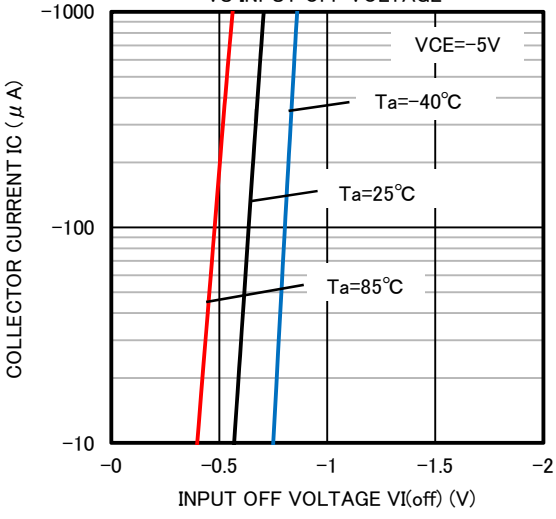
DC FORWARD CURRENT GAIN VS COLLECTOR CURRENT



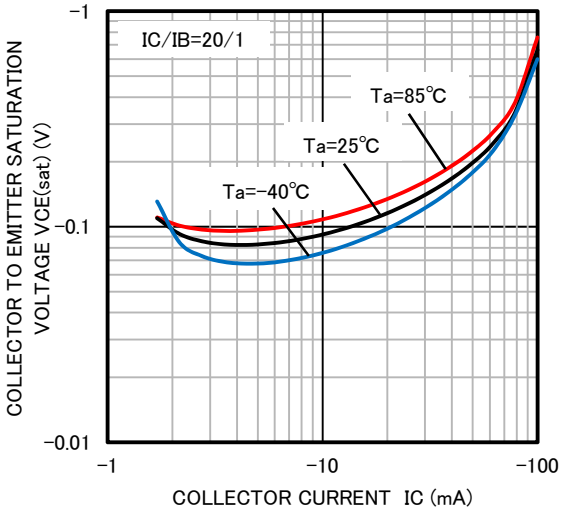
INPUT ON VOLTAGE VS COLLECTOR CURRENT



COLLECTOR CURRENT VS INPUT OFF VOLTAGE



COLLECTOR TO EMITTER SATURATION VOLTAGE VS COLLECTOR CURRENT



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