RT1P237X SERIES

〈Transistor〉

Transistor With Resistor

For Switching Application

Silicon PNP Epitaxial Type

DESCRIPTION

RT1P237X is a one chip transistor
with built-in bias resistor,NPN type is RT1N237X.

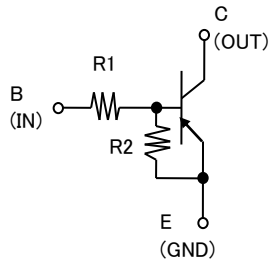
FEATURE

・Built-in bias resistor (R1=2.2kΩ,R2=47kΩ).

APPLICATION

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

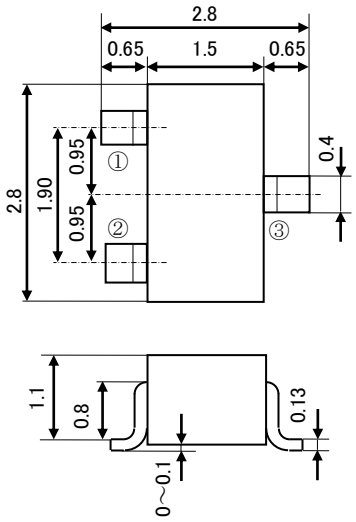
Equivalent circuit



OUTLINE DRAWING

UNIT:mm

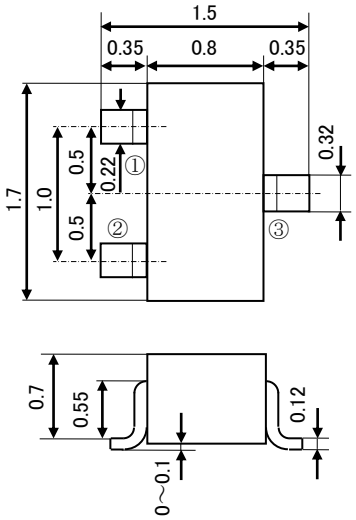
RT1P237C



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

Terminal Connector
①:Base
②:Emitter
③:Collector

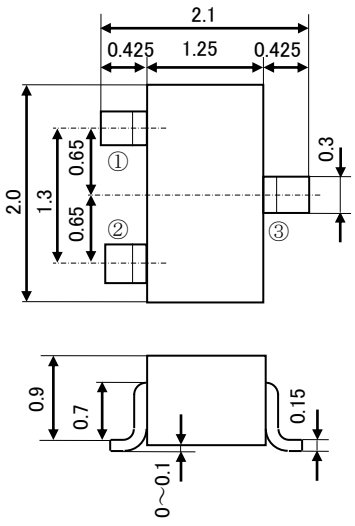
RT1P237U



JEITA:SC-75A
JEDEC:—

Terminal Connector
①:Base
②:Emitter
③:Collector

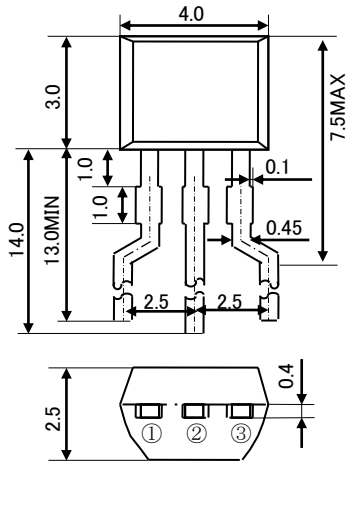
RT1P237M



JEITA:SC-70
JEDEC:—

Terminal Connector
①:Base
②:Emitter
③:Collector

RT1P237S



JEITA:—
JEDEC:—

Terminal Connector
①:Emitter
②:Collector
③:Base

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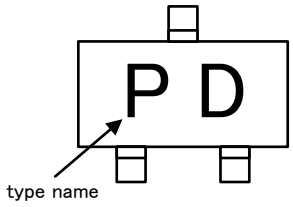
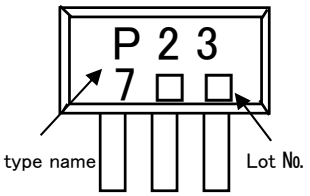
MARKING

RT1P237C RT1P237M RT1P237U	RT1P237S
	

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING				UNIT
		RT1P237U	RT1P237M	RT1P237C	RT1P237S	
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	−12				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	−76	−102	−147	μA
h_{FE}	DC forward current gain	V_{CE}=−5V, I_C=−10mA	80	—	—	—
$V_{CE(sat)}$	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	−1.1	V
$V_{I(OFF)}$	Input off voltage	V_{CE}=−5V, I_C=−100μA	−0.5	−0.6	—	V
R_1	Input resistor	—	1.5	2.2	2.9	kΩ
R_2/R_1	Resistor ratio	—	17	22	26	—
f_T	Gain band width product	V_{CE}=−6V, I_E=10mA	—	150	—	MHz

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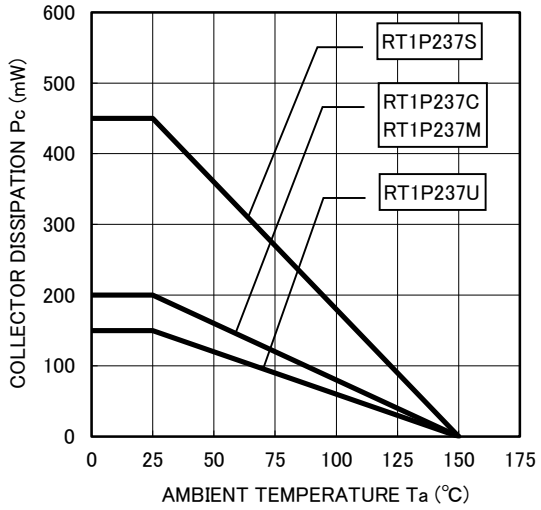
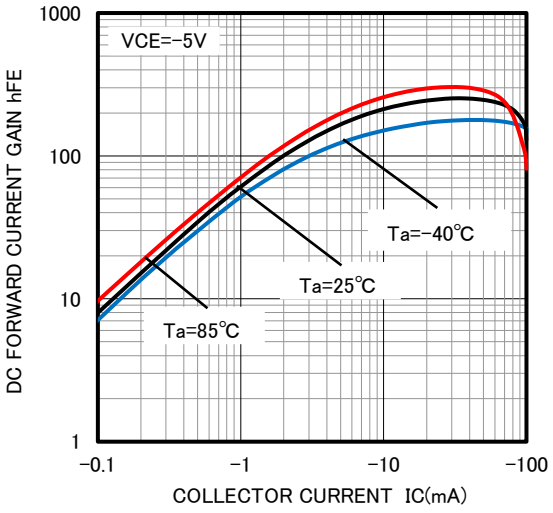
TYPICAL CHARACTERISTICS

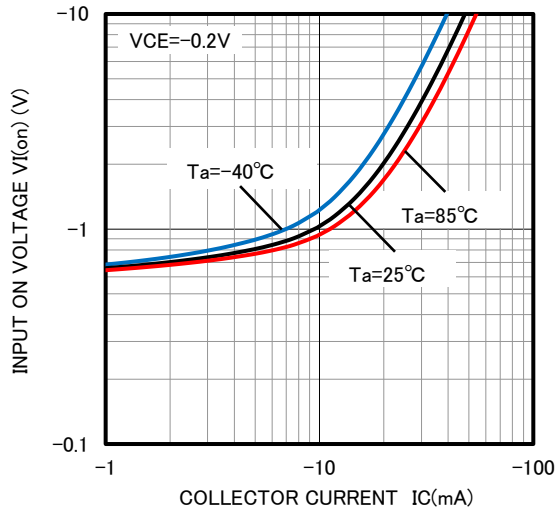
COLLECTOR DISSIPATION
VS AMBIENT TEMPERATURE



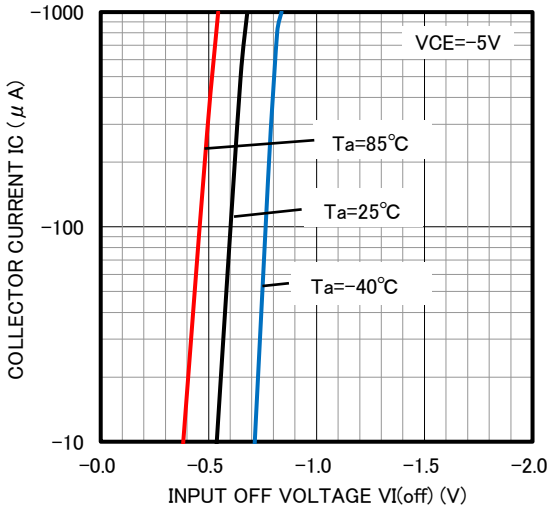
DC FORWARD CURRENT GAIN
VS COLLECTOR CURRENT



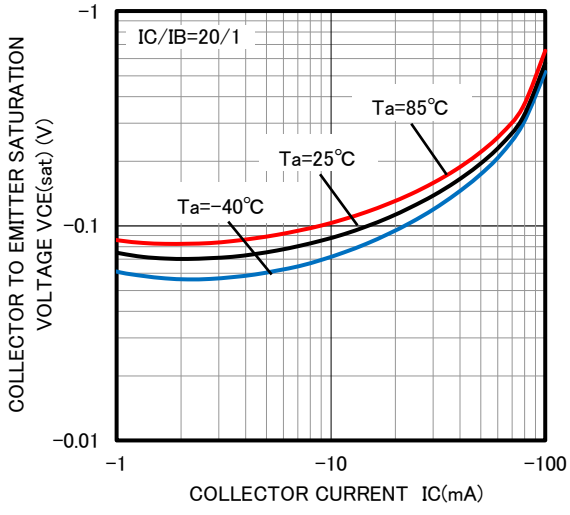
INPUT ON VOLTAGE
VS COLLECTOR CURRENT



COLLECTOR CURRENT
VS INPUT OFF VOLTAGE



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS COLLECTOR CURRENT



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