RT1P137P

Transistor With Resistor
For Switching Application
Silicon PNP Epitaxial Type

DESCRIPTION

RT1P137P is a one chip transistor
with built-in bias resistor, NPN type is RT1N137P.

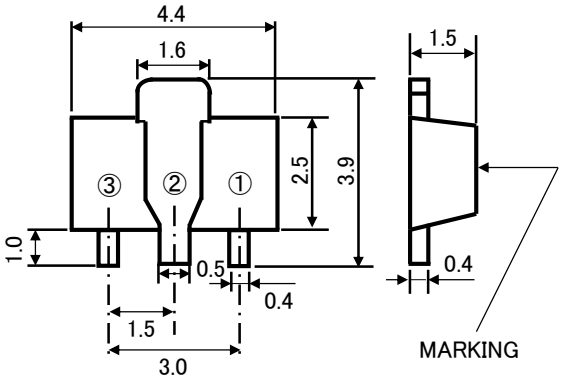
FEATURE

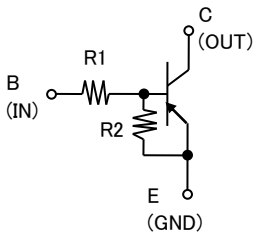
Built-in bias resistor (R_1=1kΩ, R_2=22kΩ)
High collector current (I_C=-1A)
Low $V_{CE(sat)}$ $V_{CE(sat)}$=-0.3V
(@I_C=-300mA/I_B=-3mA)

APPLICATION

Inverted circuit, Switching circuit, Interface circuit,
Driver circuit

OUTLINE DRAWING Unit: mm



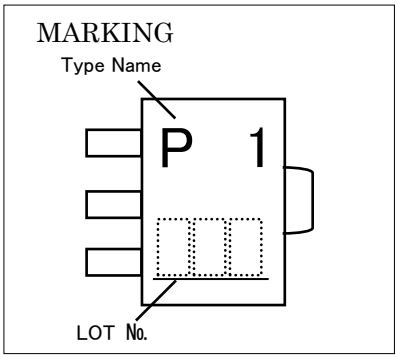


JEITA : SC-62
JEDEC : SOT-89
Terminal Connector
①: BASE
②: COLLECTOR
③: EMITTER

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	-40	V
V_{EBO}	Emitter to Base voltage	-6	V
V_{CEO}	Collector to Emitter voltage	-40	V
I_C	Collector current	-1	A
I_{CM}	Peak Collector current	-2	A
P_C	Collector dissipation	500	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	-55～+150	℃

MARKING

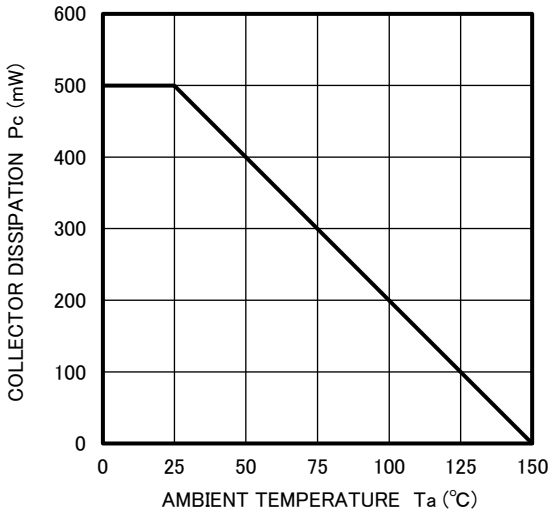


ELECTRICAL CHARACTERISTICS (Ta=25℃)

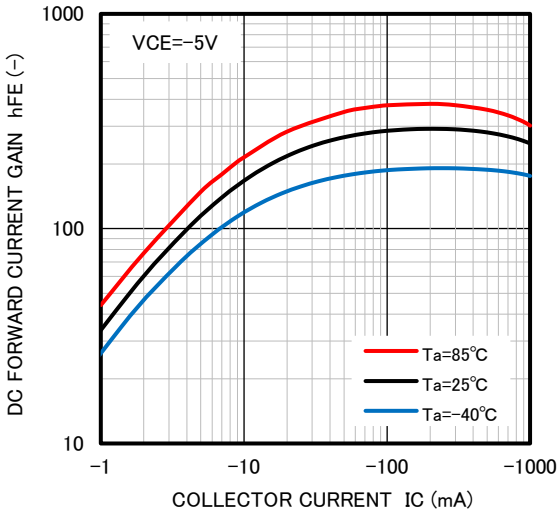
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=-1mA, R_{BE}=∞	-40	—	—	V
I_{CBO}	Collector cut off current	V_{CB}=-40V, I_E=0	—	—	-0.1	μA
I_{EBO}	Emitter cut off current	V_{EB}=-5V, I_C=0	-168	-217	-310	μA
h_{FE}	DC forward current gain	V_{CE}=-5V, I_C=-100mA	100	—	—	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=-300mA, I_B=-3mA	—	-0.1	-0.3	V
$V_{I(ON)}$	Input on voltage	V_{CE}=-0.2V, I_C=-300mA	—	-2.4	-4.0	V
$V_{I(OFF)}$	Input off voltage	V_{CE}=-5V, I_C=-100μA	-0.4	-0.53	—	V
R_1	Input resistor	—	0.7	1.0	1.3	kΩ
R_2/R_1	Resistor ratio	—	20	22	24	—
f_T	Gain band width product	V_{CE}=-6V, I_E=10mA	—	130	—	MHz

TYPICAL CHARACTERISTICS

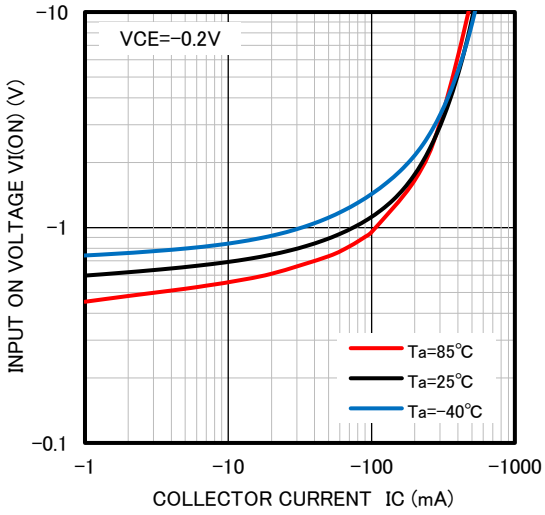
COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE



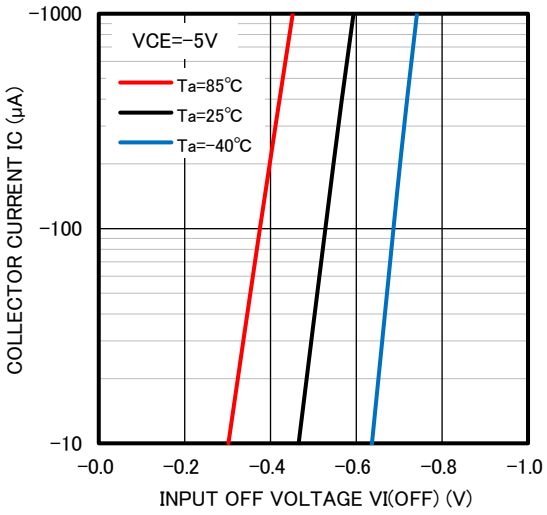
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



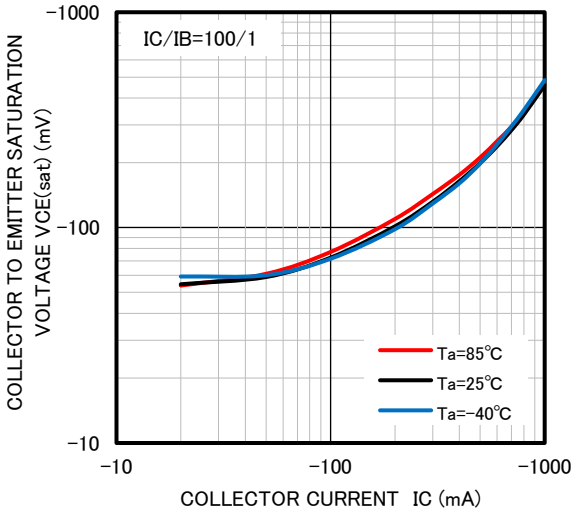
INPUT ON VOLTAGE
VS. COLLECTOR CURRENT



COLLECTOR CURRENT
VS. INPUT OFF VOLTAGE



COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT



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