

RT5N231C

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT5N231C is a one chip transistor with built-in bias resistor, PNP type is RT5P231C.

FEATURE

Built-in bias resistor ($R_1=2.2k\Omega$, $R_2=2.2k\Omega$)

High collector current ($I_C=0.5A$)

Mini package for easy mounting

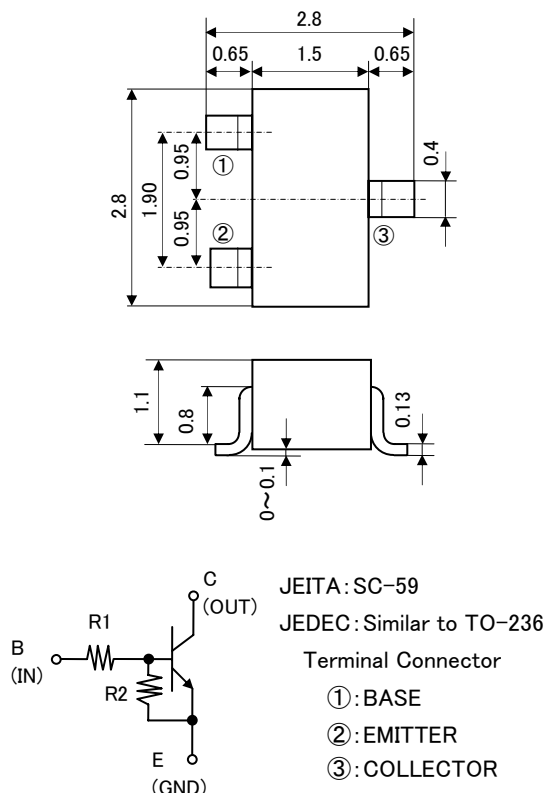
APPLICATION

Inverted circuit, Switching circuit, Interface circuit,

Driver circuit

OUTLINE DRAWING

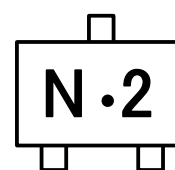
Unit: mm



MAXIMUM RATING ($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	10	V
V_{IN}	Input voltage	12	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	500	mA
P_C	Collector dissipation($T_a=25^{\circ}C$)	200	mW
T_j	Junction temperature	+150	$^{\circ}C$
T_{stg}	Storage temperature	-55~+150	$^{\circ}C$

MARKING



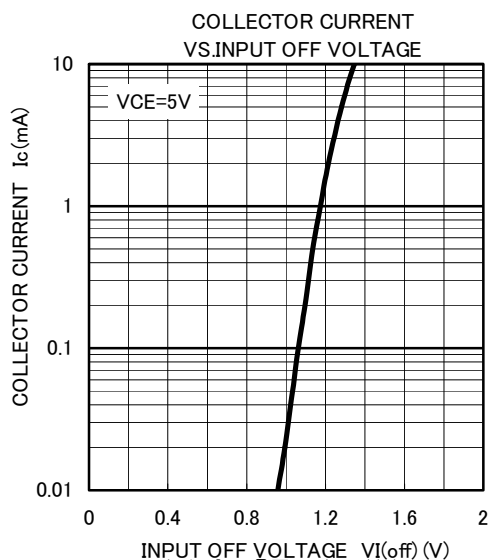
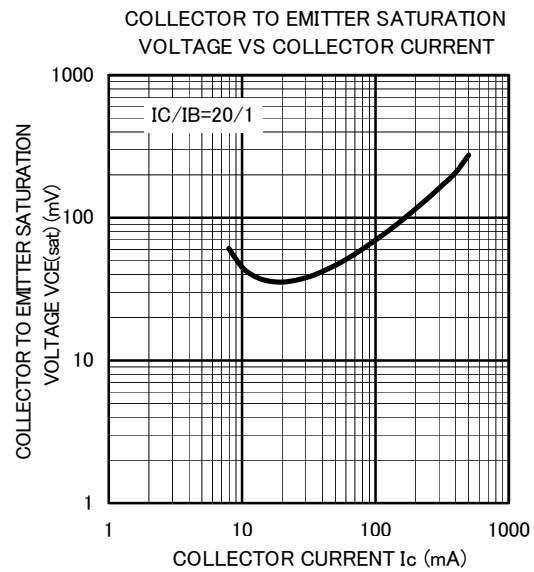
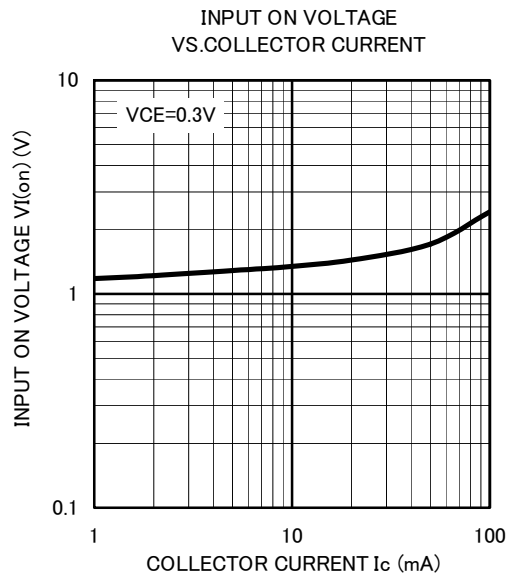
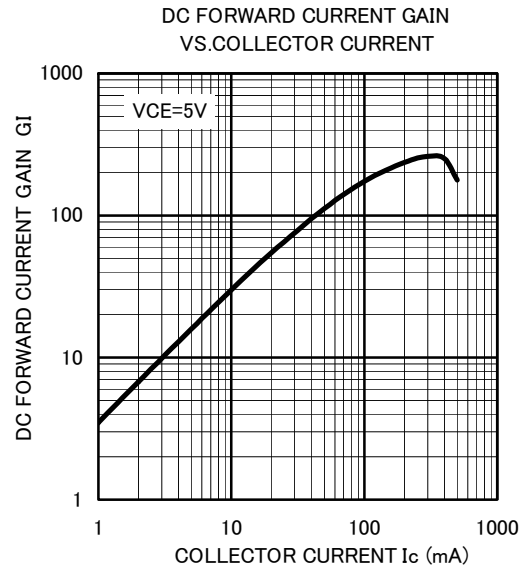
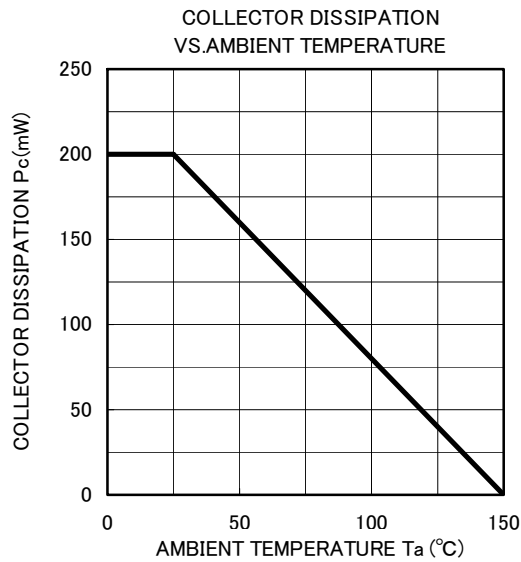
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{I(on)}$	Input on voltage	$V_{CE}=0.3V$, $I_C=20mA$	—	—	3	V
$V_{I(off)}$	Input off voltage	$V_{CE}=5V$, $I_C=100\mu A$	0.5	—	—	V
$V_{CE(sat)}$	C to E saturation voltage	$I_C=50mA$, $I_B=2.5mA$	—	0.1	0.3	V
I_{BE}	B to E current	$V_{BE}=5V$	—	—	3.8	mA
I_{CES}	Collector cut off current	$V_{CE}=50V$, $V_{BE}=0V$	—	—	0.5	μA
G_1	DC forward current gain	$V_{CE}=5V$, $I_C=50mA$	39	—	—	—
R_1	Input resistor	—	1.54	2.2	2.86	$k\Omega$
R_2/R_1	Resistor ratio	—	0.8	1	1.2	—
f_T	Gain band width product	$V_{CE}=10V$, $I_E=-5mA$, $f=100MHz$	—	200	—	MHz

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TYPICAL CHARACTERISTICS($T_a=25^\circ\text{C}$)





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