

RT5N431C

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT5N431C is a one chip transistor with built-in bias resistor.

FEATURE

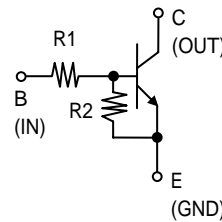
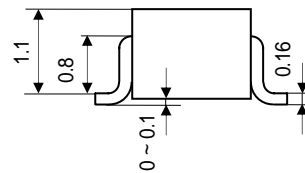
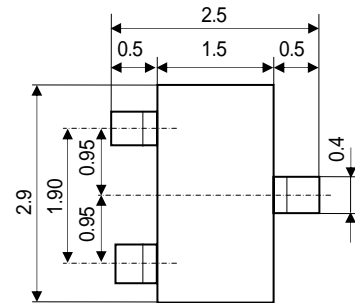
Built-in bias resistor ($R_1=4.7k$, $R_2=4.7k$)
High collector current ($I_c=0.5A$)
Mini package for easy mounting

APPLICATION

Inverted circuit, Switching circuit, Interface circuit,
Driver circuit

OUTLINE DRAWING

Unit: mm



JEITA: SC-59

: BASE

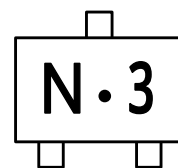
: EMITTER

: COLLECTOR

MAXIMUM RATING (Ta=25)

SYMBOL	PARAMETER	RATING		UNIT
V_{CBO}	Collector to Base voltage	50		V
V_{EBO}	Emitter to Base voltage	-10	30	V
V_{CEO}	Collector to Emitter voltage	50		V
I_C	Collector current	500		mA
P_C	Collector dissipation(Ta=25)	200		mW
T_j	Junction temperature	+ 150		
T_{stg}	Storage temperature	-55 ~ + 150		

MARKING



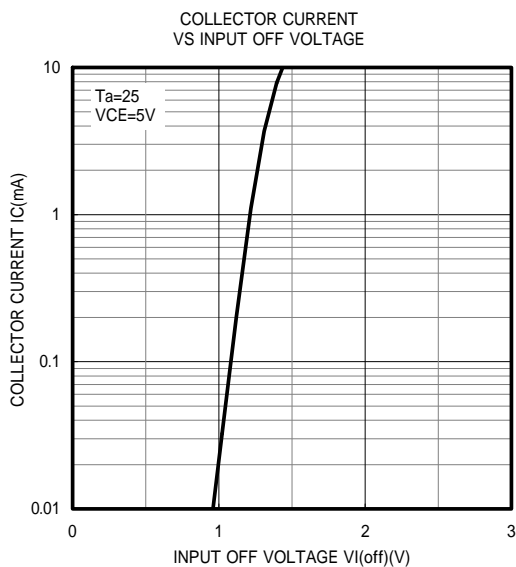
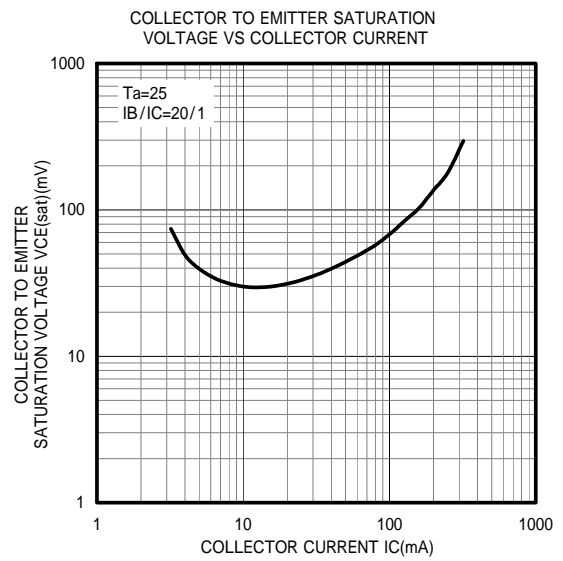
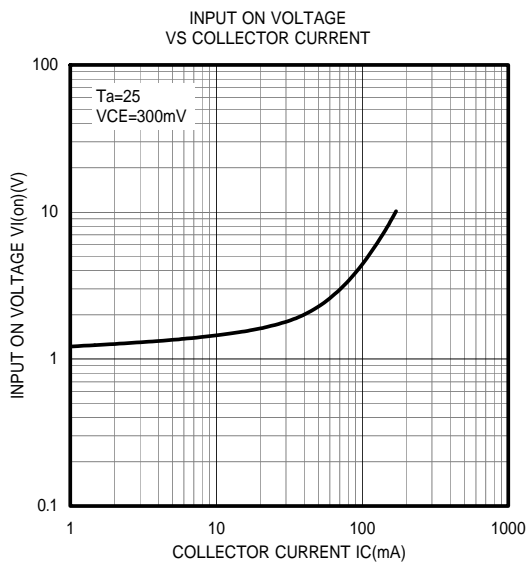
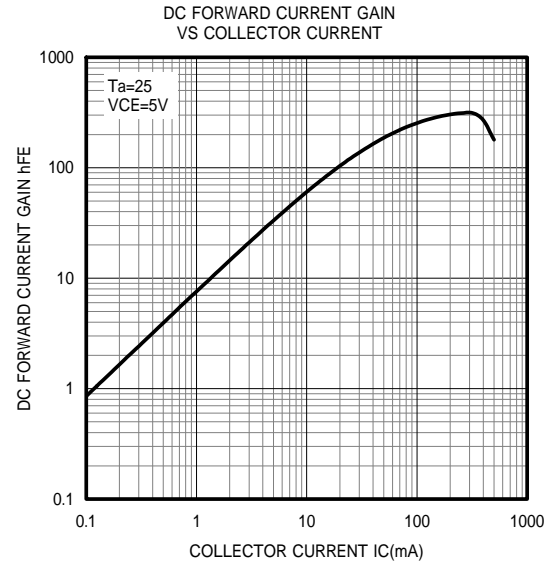
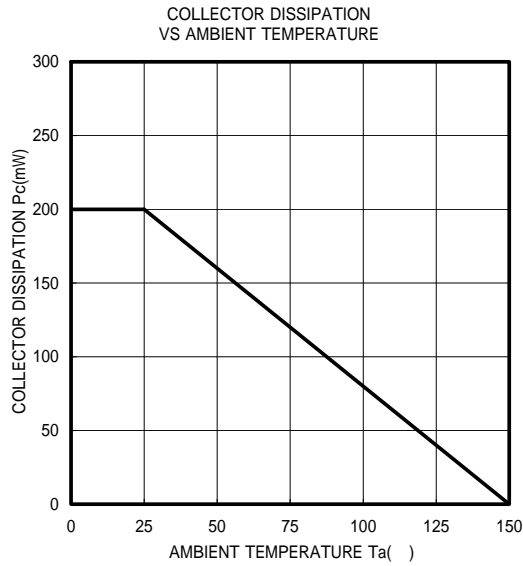
ELECTRICAL CHARACTERISTICS (Ta=25)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{I(on)}$	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	$V_{EB}=5V$			1.8	mA
I_{CES}	Collector cut off current	$V_{CE}=50V$, $V_{BE}=0V$			0.5	μA
G_I	DC forward current gain	$V_{CE}=5V$, $I_E=50mA$	47			
R_1	Input resistor		3.29	4.7	6.11	k
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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For Switching Application
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TYPICAL CHARACTERISTICS





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