

# 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 ( $I_c=0.5A$ )

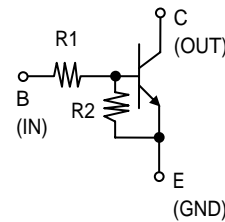
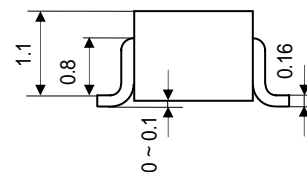
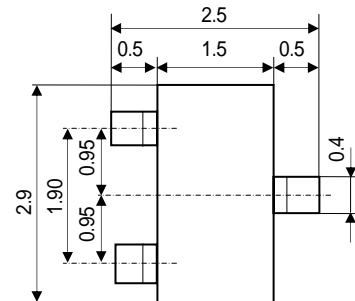
Mini package for easy mounting

## APPLICATION

Inverted circuit, Switching circuit, Interface circuit,  
Driver circuit

## OUTLINE DRAWING

Unit: mm



JEITA: SC-59

: BASE

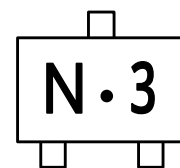
: EMITTER

: 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

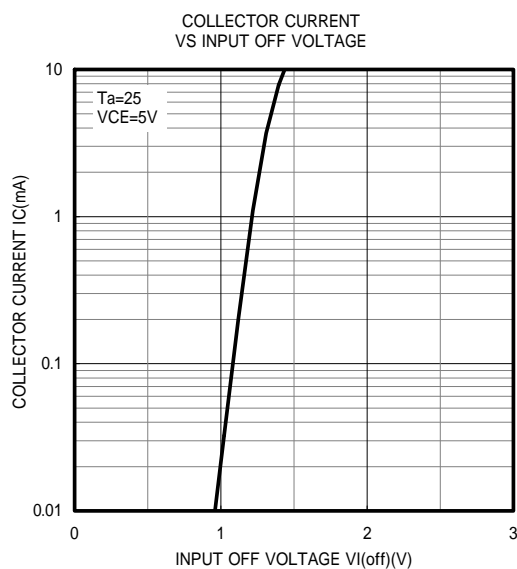


## ELECTRICAL CHARACTERISTICS (Ta=25 )

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	$\mu A$
$G_I$	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



### Transistor With Resistor For Switching Application Silicon NPN Epitaxial Type







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