RT5N431C

Transistor With Resistor For Switching Application Silicon NPN Epitaxial Type

DESCRIPTION

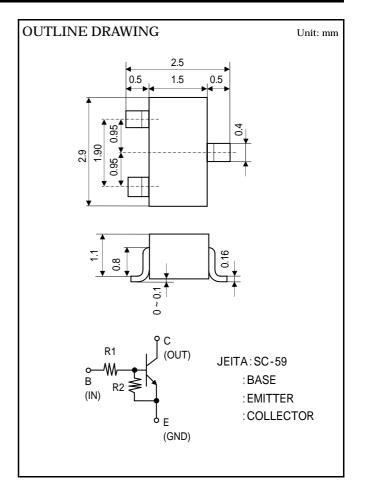
RT5N431C is a one chip transistor with built-in bias resistor.

FEATURE

 $\begin{array}{ll} Built-in\ bias\ resistor & (R_1{=}4.7k \quad ,\ R_2{=}4.7k \quad) \\ High\ collector\ current & (Ic{=}0.5A) \\ Mini\ package\ for\ easy\ mounting \end{array}$

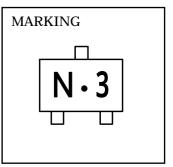
APPLICATION

Inverted circuit, Switching circuit, Interface circuit, Driver circuit



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	
VCEO	Collector to Emitter voltage	50		V	
I_{C}	Collector current	500		mA	
Pc	Collector dissipation(Ta=25)	200		mW	
Tj	Junction temperature	+ 150			
T _{stg}	Storage temperature	-55 ~ + 150			



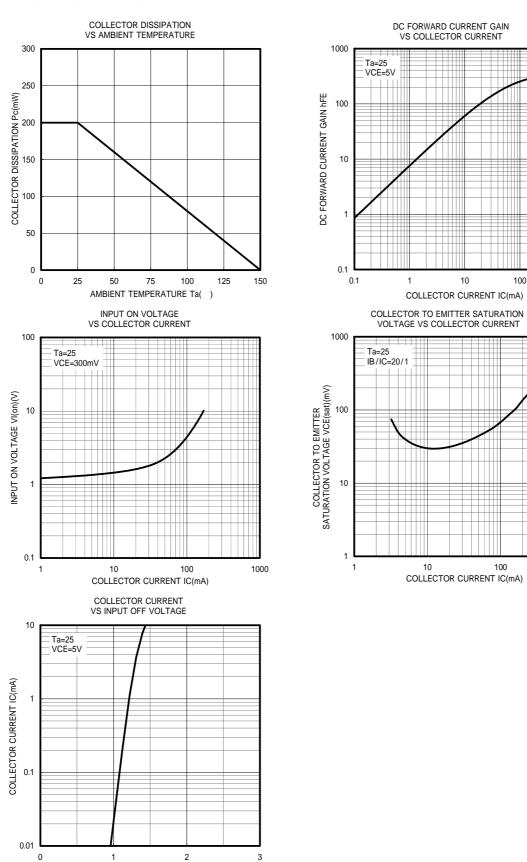
ELECTRICAL CHARACTERISTICS (Ta=25)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	UNII
V _{I(on)}	Input on voltage	V_{CE} =0.3V , I_{C} =20mA			3	V
V _{I(off)}	Input off voltage	$V_{\text{CE}} = 5V$, $I_{\text{C}} = 100~\mu$ 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
Ices	Collector cut off current	$V_{\text{CE}} = 50 \text{V}$, $V_{\text{BE}} = 0 \text{V}$			0.5	μA
$G_{\rm I}$	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	
\mathbf{f}_{T}	Gain band width product	V_{CE} =10V , I_{E} =-5mA , f =100MHz		200		MHz

1000

1000

TYPICAL CHARACTERISTICS



INPUT OFF VOLTAGE VI(off)(V)



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