

RT5N333C

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT5N333C is a one chip transistor with built-in bias resistor, PNP type is RT5P333C.

FEATURE

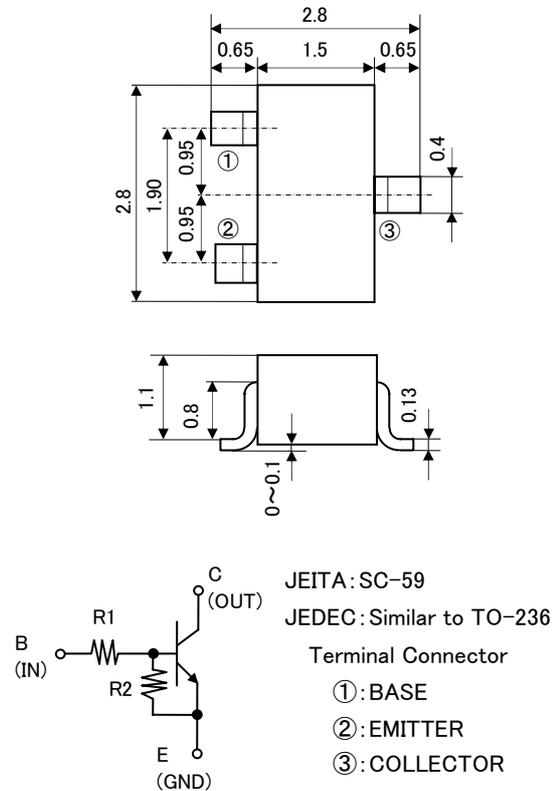
Built-in bias resistor ($R_1=3.3k\Omega$, $R_2=10k\Omega$)
High collector current ($I_c=0.5A$)
Mini package for easy mounting

APPLICATION

Inverted circuit, Switching circuit, Interface circuit,
Driver circuit

OUTLINE DRAWING

Unit: mm



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

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	6	V
V_{IN}	Input voltage	20	V
V_{CEO}	Collector to Emitter voltage	50	V
I_C	Collector current	500	mA
P_C	Collector dissipation($T_a=25^\circ\text{C}$)	200	mW
T_j	Junction temperature	+150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+150	$^\circ\text{C}$

MARKING



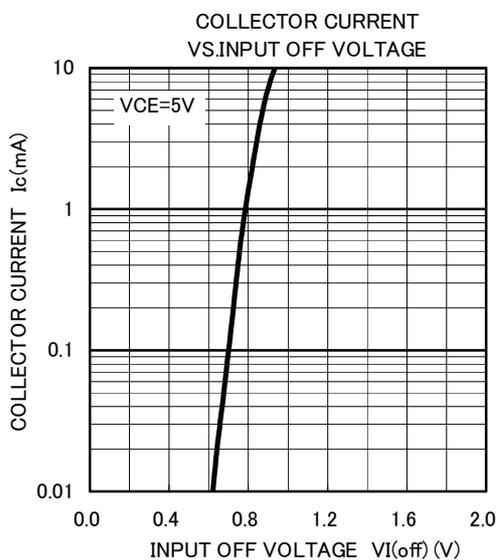
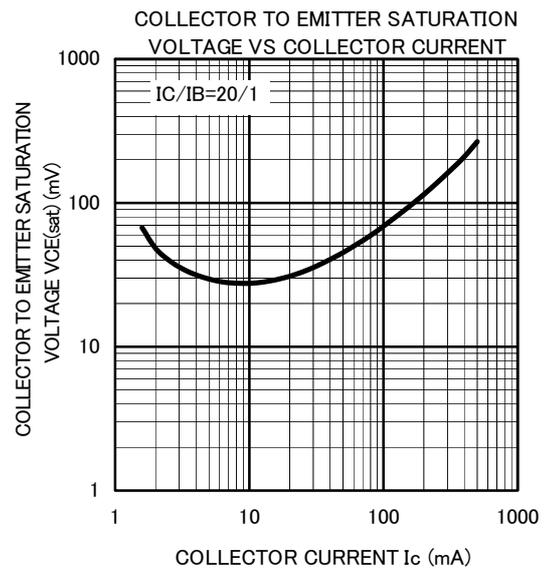
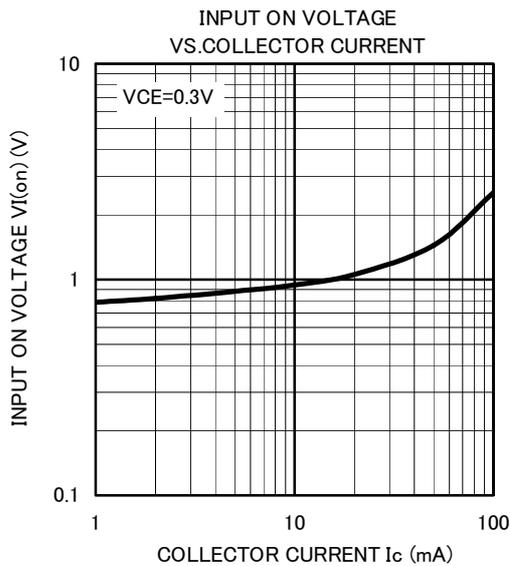
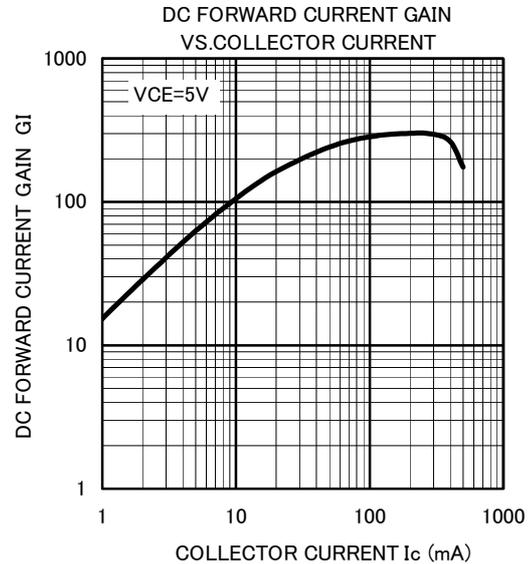
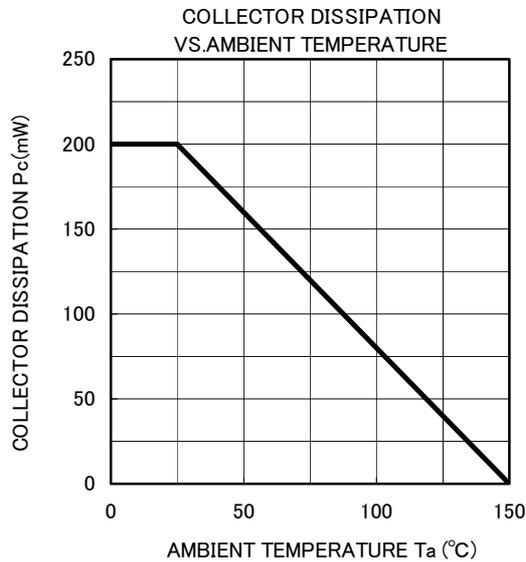
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{I(on)}$	Input on voltage	$V_{CE}=0.3V$, $I_C=20mA$	—	—	2	V
$V_{I(off)}$	Input off voltage	$V_{CE}=5V$, $I_C=100\mu A$	0.3	—	—	V
$V_{CE(sat)}$	C to E saturation voltage	$I_C=50mA$, $I_E=2.5mA$	—	0.1	0.3	V
I_{BE}	B to E current	$V_{BE}=5V$	—	—	2.4	mA
I_{CES}	Collector cut off current	$V_{CE}=50V$, $V_{BE}=0V$	—	—	0.5	μA
G_1	DC forward current gain	$V_{CE}=5V$, $I_C=50mA$	56	—	—	—
R_1	Input resistor	—	2.31	3.3	4.29	$k\Omega$
R_2/R_1	Resistor ratio	—	2.4	3.0	3.7	—
f_T	Gain band width product	$V_{CE}=10V$, $I_E=-5mA$, $f=100MHz$	—	200	—	MHz

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





Keep safety first in your circuit designs!

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