

RT5N140C

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

DESCRIPTION

RT5N140C is a one chip transistor with built-in bias resistor, PNP type is RT5P140C.

FEATURE

Built-in bias resistor ($R_1=10k\Omega$)

High collector current ($I_c=0.5A$)

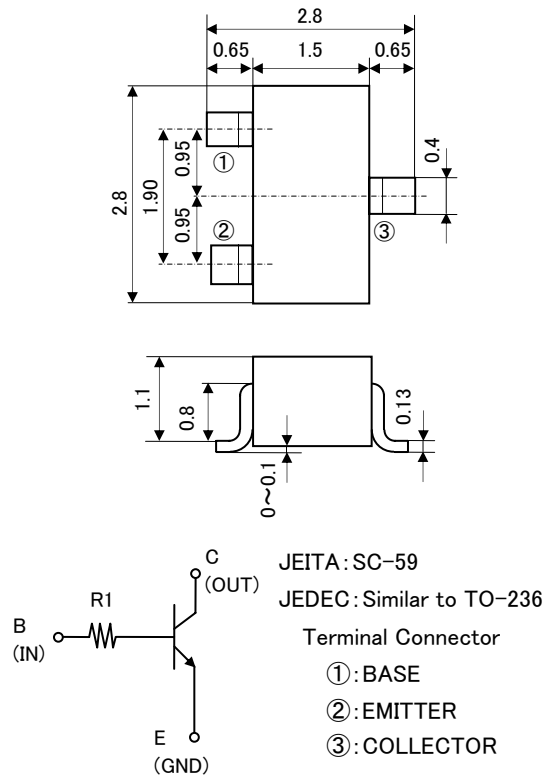
Mini package for easy mounting

APPLICATION

Inverted circuit, Switching circuit, Interface circuit,
Driver circuit

OUTLINE DRAWING

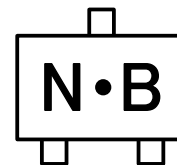
Unit: mm



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	5	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



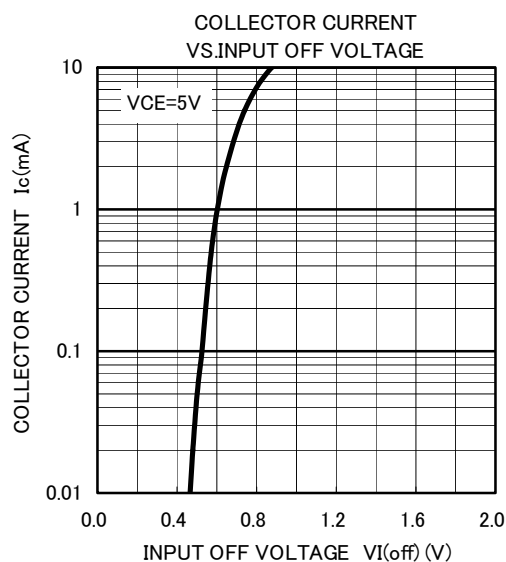
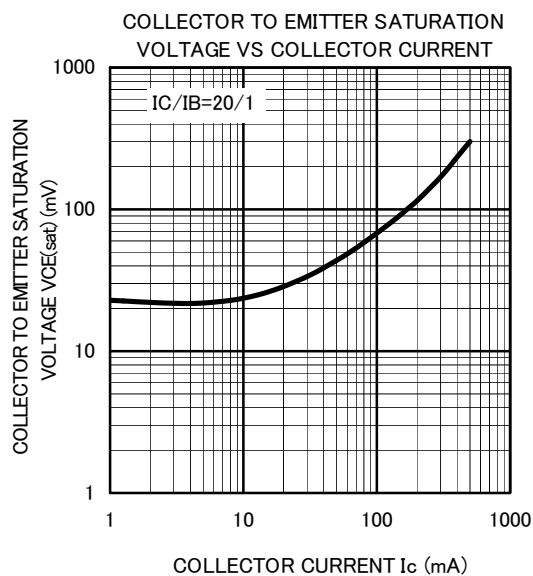
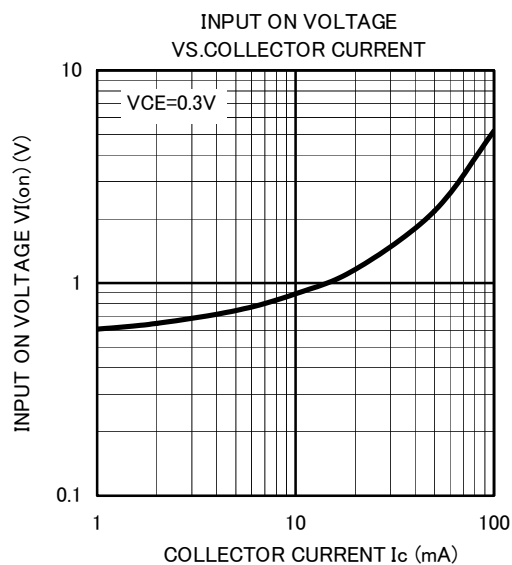
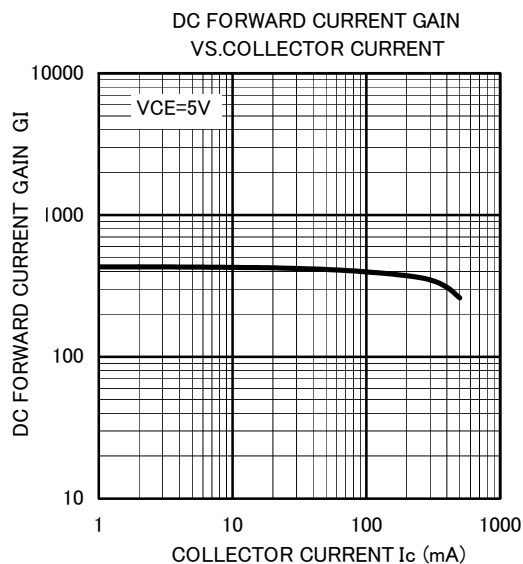
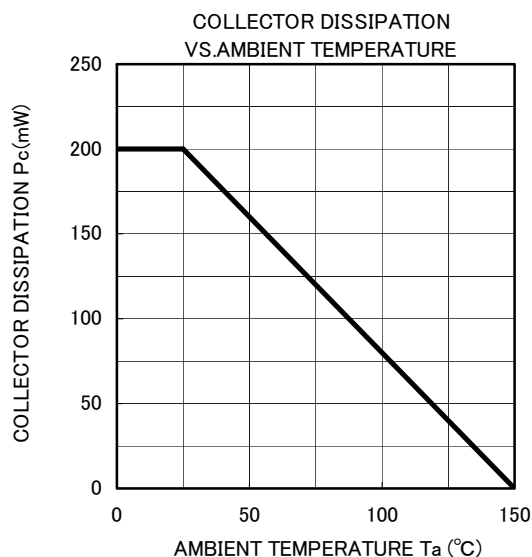
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
V_{CBO}	C to B break down voltage	$I_C=50\mu\text{A}$	50	—	—	V
V_{CEO}	C to E break down voltage	$I_C=1\text{mA}$	50	—	—	V
V_{EBO}	E to B break down voltage	$I_E=50\mu\text{A}$	5	—	—	V
I_{CBO}	Collector cut off current	$V_{CB}=50\text{V}$	—	—	0.5	μA
I_{EBO}	Emitter cut off current	$V_{EB}=4\text{V}$	—	—	0.5	μA
$V_{CE(sat)}$	C to E saturation voltage	$I_C=50\text{mA}$, $I_B=2.5\text{mA}$	—	—	0.3	V
G_I	DC forward current gain	$V_{CE}=5\text{V}$, $I_E=50\text{mA}$	100	250	600	—
R_1	Input resistor	—	7	10	13	$k\Omega$
f_T	Gain band width product	$V_{CE}=10\text{V}$, $I_E=-50\text{mA}$, $f=100\text{MHz}$	—	200	—	MHz

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





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