

〈SMALL-SIGNAL TRANSISTOR〉

# RTGN14BAC1-T150

TRANSISTOR WITH RESISTOR  
FOR SWITCHING APPLICATION  
SILICON NPN EPITAXIAL TYPE

AEC-Q101 Compliance

## DISCRIPTION

RTGN14BAC1 is a one chip transistor with built-in bias transistor.

## FEATURE

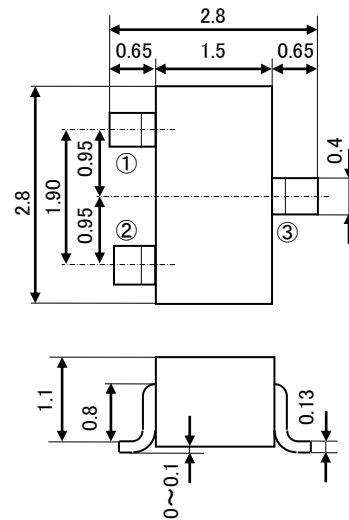
- Built-in bias resistor (R2=10kΩ)
- High collector current IC=1A
- Built-in zener diode between collector and base

## APPLICATION

Motor driver circuit

## OUTLINE DRAWING

Unit:mm



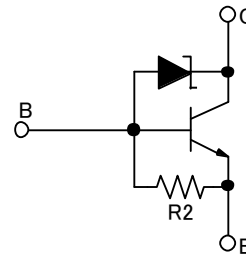
Terminal  
Connector  
① BASE  
② EMITTER  
③ COLLECTOR

JEITA: SC-59  
JEDEC: Similar to TO-236

## MAXIMUM RATING (Ta=25°C)

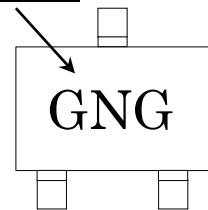
SYMBOL	PARAMETER	RATING	UNIT
V <sub>CB0</sub>	Collector to Base voltage	60±10	V
V <sub>EB0</sub>	Emitter to Base voltage	10	V
V <sub>CE0</sub>	Collector to Emitter voltage	60±10	V
I <sub>C</sub>	Collector current (DC)	1	A
I <sub>CM</sub>	Collector current (pulse)	2	A
P <sub>C</sub>	Collector dissipation	200	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

## EQUIVALENT CIRCUIT



## MARKING

Type name



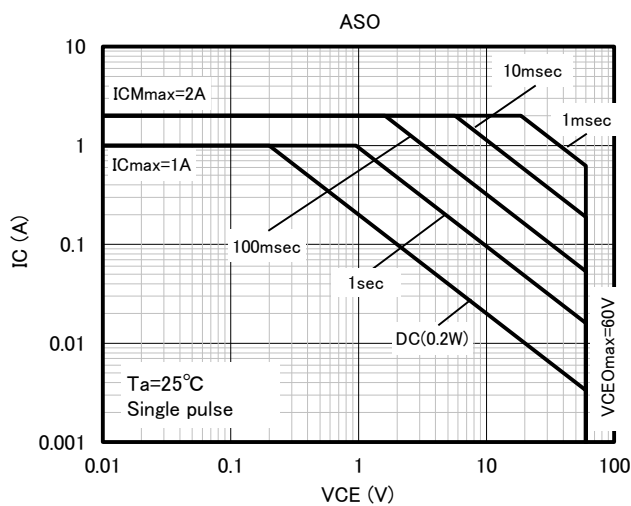
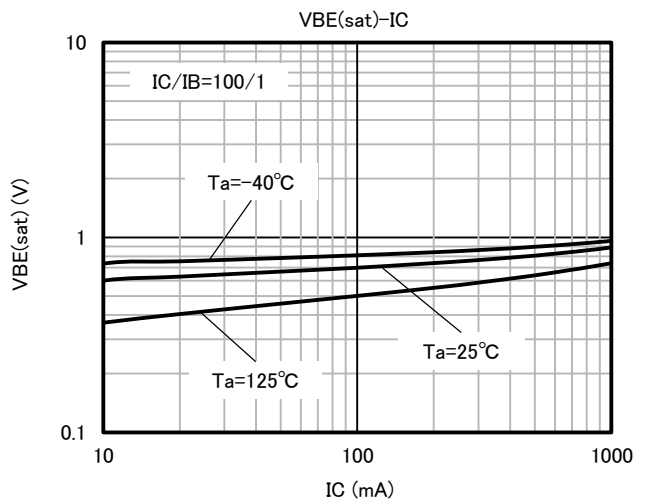
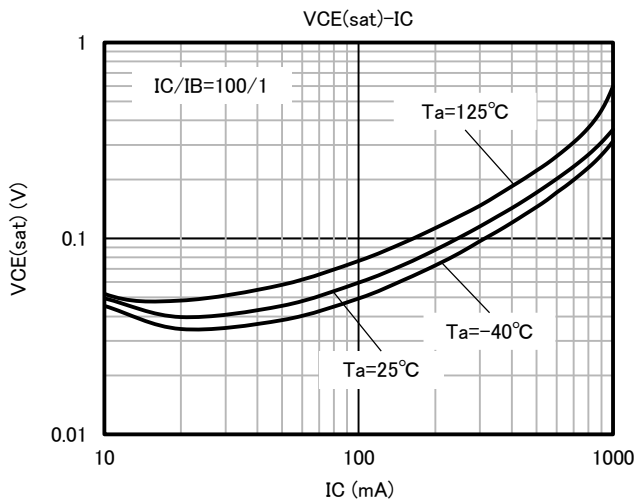
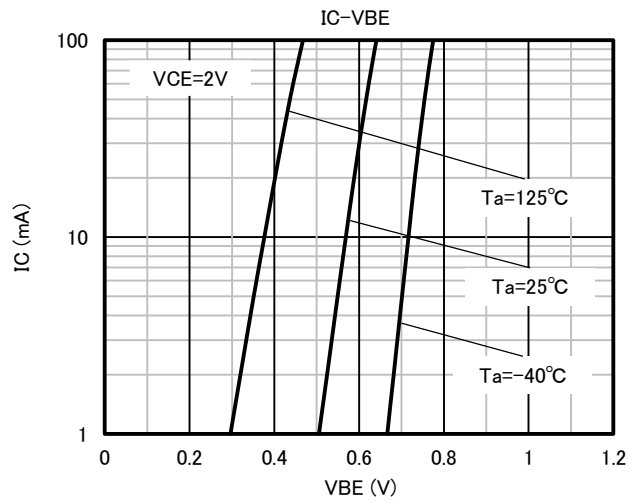
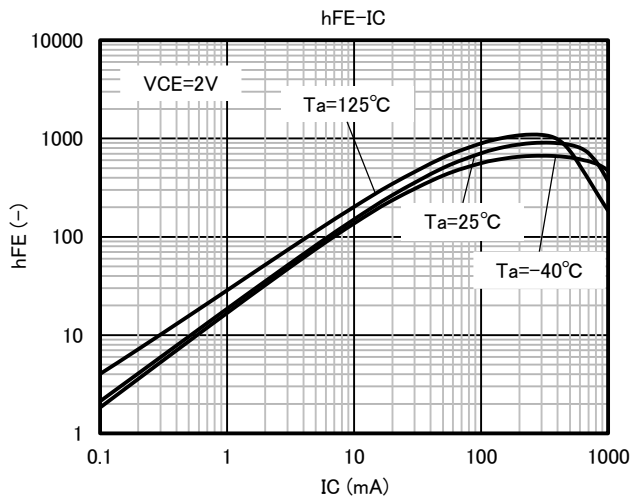
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> =40V, I <sub>E</sub> =0	—	—	0.1	μA
V <sub>IL</sub>	Input voltage (OFF)	V <sub>CE</sub> =5V, I <sub>C</sub> =100 μA	0.3	—	—	V
h <sub>FE1</sub>	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =0.1A	200	—	—	—
h <sub>FE2</sub>	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	300	—	—	—
h <sub>FE3</sub>	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =1A	200	—	—	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =500mA, I <sub>B</sub> =5mA	—	—	400	mV
R <sub>2</sub>	Emitter – Base resistor	—	7	10	13	kΩ

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## TYPICAL CHARACTERISTICS



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