

〈SMALL-SIGNAL TRANSISTOR〉

# RTGN234AP

TRANSISTOR WITH RESISTOR  
FOR SWITCHING APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DISCRIPTION

RTGN234AP is a one chip transistor with built-in bias transistor.

## FEATURE

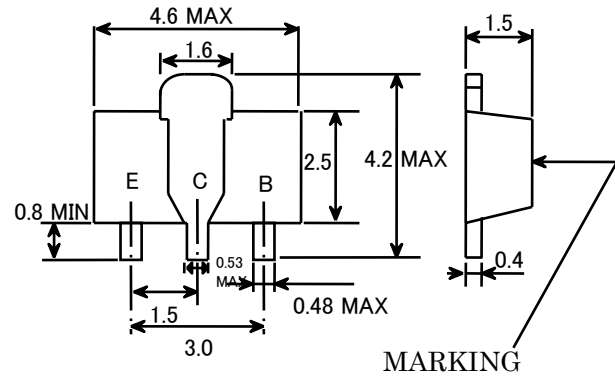
- Built-in bias resistor (R1=2.2kΩ,R2=10kΩ)
- High collector current IC=1A
- Built-in zener diode between collector and base

## APPLICATION

Motor driver circuit

## OUTLINE DRAWING

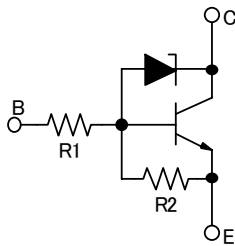
Unit:mm



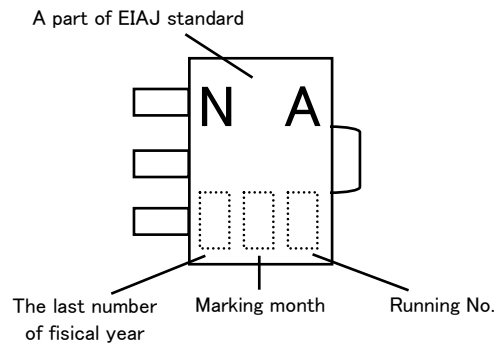
## TERMINAL CONNECTOR

E: EMITTER  
C: COLLECTOR  
B: BASE      JEDEC :—

## EQUIVALENT CIRCUIT



## MARKING



## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT
V <sub>CBO</sub>	Collector to Base voltage	60±10	V
V <sub>EBO</sub>	Emitter to Base voltage	10	V
V <sub>CEO</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	500	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

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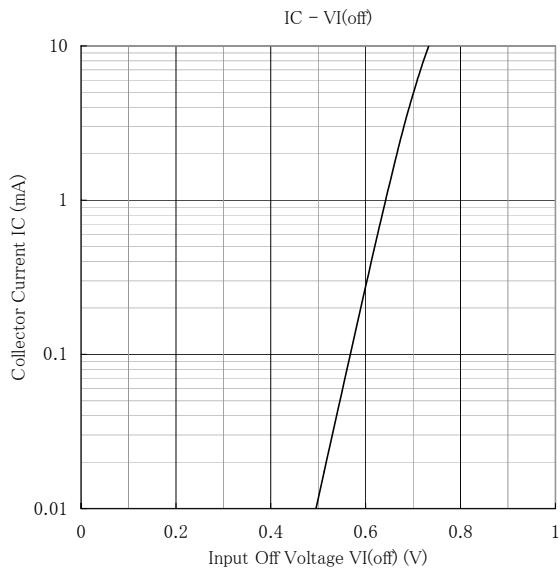
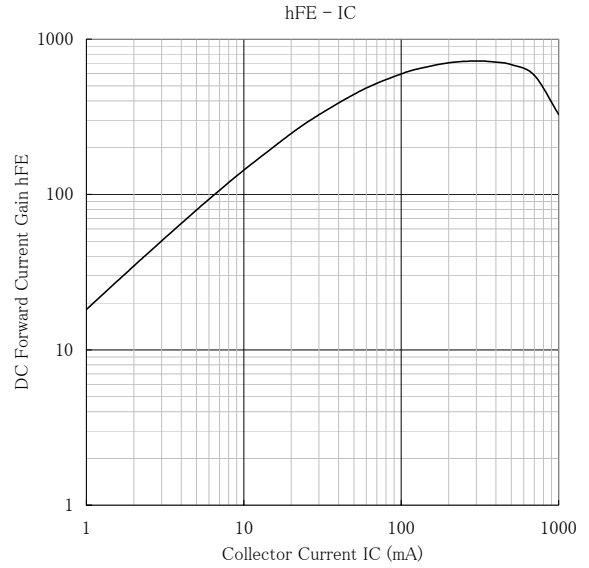
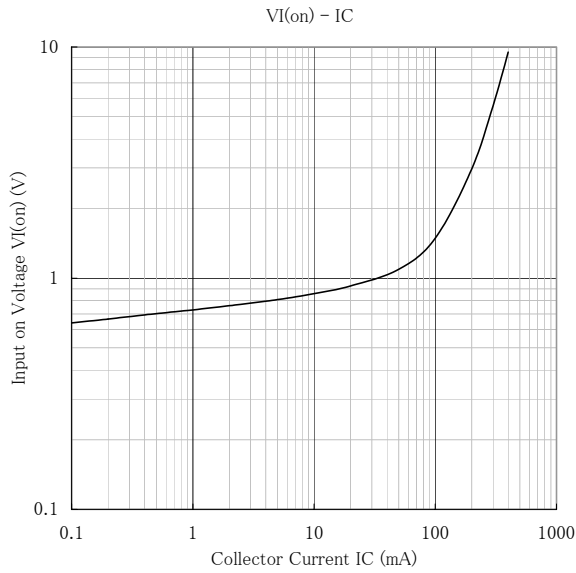
## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
I <sub>CBO</sub>	Collector cut off current	V <sub>CB</sub> =40V, I <sub>E</sub> =0	—	—	0.1	μA
V <sub>OL</sub>	Output voltage	V <sub>I</sub> =5V, I <sub>C</sub> =300mA	—	—	0.3	V
V <sub>IL</sub>	Input voltage (OFF)	V <sub>CE</sub> =5V, I <sub>C</sub> =100 μA	0.3	—	—	V
hFE1	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =0.1A	200	—	—	—
hFE2	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	300	—	—	—
hFE3	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =1A	200	—	—	—
R <sub>1</sub>	Input resistor	—	1.54	2.20	2.86	KΩ
R <sub>2</sub>	Emitter – Base resistor	—	7	10	13	KΩ

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