

# PRELIMINARY

Notice: This is not a final specification  
Some parametric are subject to change.

<SMALL-SIGNAL TRANSISTOR>

## RTBN432AP1

TRANSISTOR WITH RESISTOR  
FOR SWITCHING APPLICATION  
SILICON NPN EPITAXIAL TYPE

### DESCRIPTION

RTBN432AP1 is a one chip transistor with built-in bias transistor.

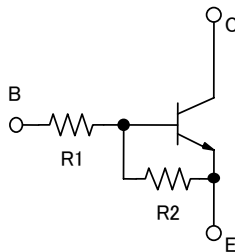
### FEATURE

- Built-in bias resistor (R1=4.7kΩ, R2=10kΩ)
- High collector current (IC=1A)
- Small package for easy mounting.

### APPLICATION

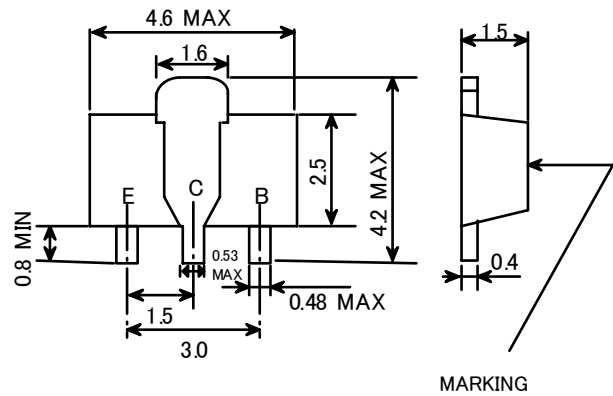
Switching.

### EQUAIVALENT CIRCUIT



### OUTLINE DRAWING

UNIT: mm



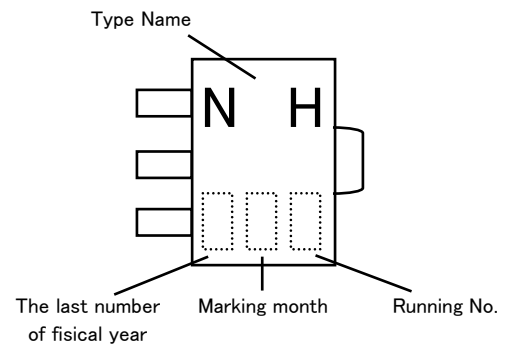
### TERMINAL CONNECTOR

E: EMITTER JEITA: SC-62  
C: COLLECTOR JEDEC: SOT-89  
B: BASE

### MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT
V <sub>CBO</sub>	Collector to Base voltage	80	V
V <sub>EBO</sub>	Emitter to Base voltage	10	V
V <sub>CEO</sub>	Collector to Emitter voltage	60	V
I <sub>C</sub>	Collector current	1	A
I <sub>CM</sub>	Peak collector current	2	A
P <sub>CM</sub>	Collector dissipation (Ta=25°C)	500	mW
T <sub>J</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

### MARKING



### ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
I <sub>CBO</sub>	Collector cut off current	V <sub>CE</sub> =60V, I <sub>E</sub> =0	—	—	0.1	μA
V <sub>I(on)</sub>	Input on voltage	V <sub>CE</sub> =0.2V, I <sub>C</sub> =0.2A	—	2.4	5.0	V
V <sub>I(off)</sub>	Input off voltage	V <sub>CE</sub> =5V, I <sub>C</sub> =100 μA	0.3	0.67	—	V
hFE1	DC forward current gain1	V <sub>CE</sub> =2V, I <sub>C</sub> =0.1A	200	—	—	—
hFE2	DC forward current gain2	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	300	850	—	—
hFE3	DC forward current gain3	V <sub>CE</sub> =2V, I <sub>C</sub> =1A	200	—	—	—
R1	Input resistor	—	3.29	4.7	6.11	kΩ
R2	Emitter-base resistor	—	7	10	13	kΩ



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**Keep safety first in your circuit designs!**

•ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1) placement of substitutive, auxiliary, (2) use of non-flammable material or (3) prevention against any malfunction or mishap.

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