

PRELIMINARY

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

<SMALL-SIGNAL TRANSISTOR>

RTBN131AP1

TRANSISTOR WITH RESISTOR
FOR SWITCHING APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

RTBN131AP1 is a one chip transistor with built-in bias transistor.

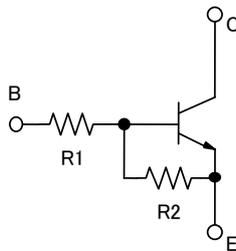
FEATURE

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

APPLICATION

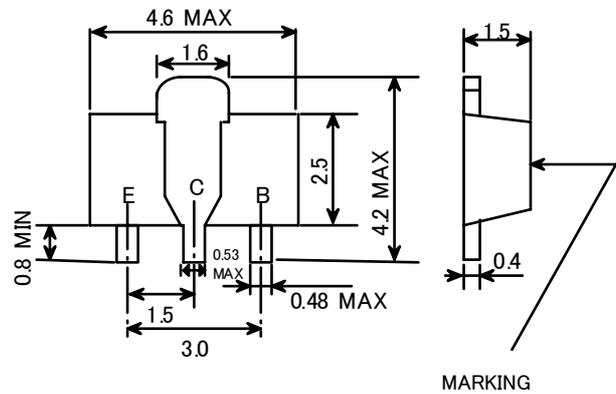
Switching.

EQUAIVALENT CIRCUIT



OUTLINE DRAWING

UNIT: mm



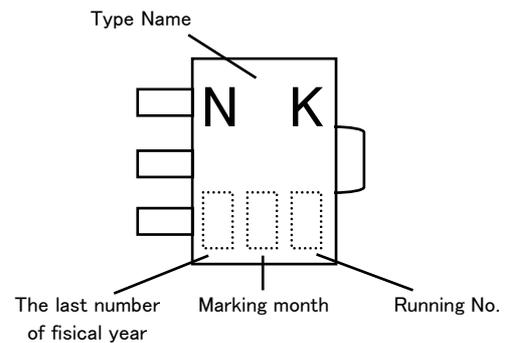
TERMINAL CONNECTOR

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

MAXIMUM RATING (Ta=25°C)

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

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
I _{CBO}	Collector cut off current	V _{CE} =60V, I _E =0	—	—	0.1	μA
V _{I(on)}	Input on voltage	V _{CE} =0.35V, I _C =0.4A	—	—	5.0	V
V _{I(off)}	Input off voltage	V _{CE} =5V, I _C =100 μA	0.3	—	—	V
hFE1	DC forward current gain1	V _{CE} =2V, I _C =0.1A	80	—	—	—
hFE2	DC forward current gain2	V _{CE} =2V, I _C =0.5A	200	—	—	—
hFE3	DC forward current gain3	V _{CE} =2V, I _C =1A	200	—	—	—
R1	Input resistor	—	0.7	1.0	1.3	kΩ
R2	Emitter-base resistor	—	0.7	1.0	1.3	kΩ



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Keep safety first in your circuit designs!

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