

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.

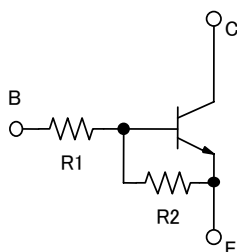
FEATURE

- Built-in bias resistor ($R1=1k\Omega$, $R2=1k\Omega$)
- High collector current ($I_C=1A$)
- Small package for easy mounting.

APPLICATION

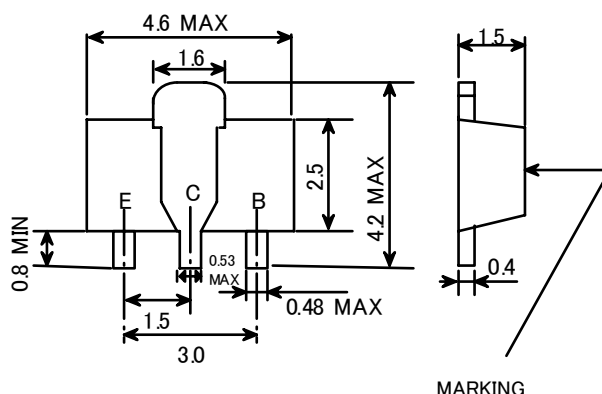
Switching.

EQUAIVALENT CIRCUIT



OUTLINE DRAWING

UNIT: mm



TERMINAL CONNECTOR

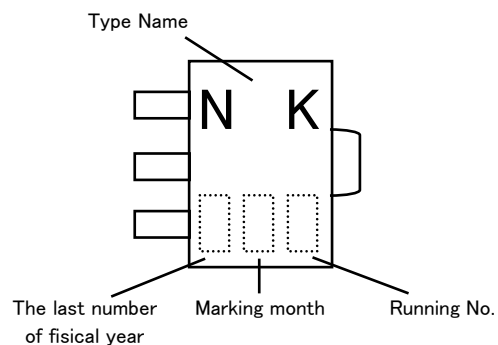
E: EMITTER
C: COLLECTOR
B: BASE

JEITA: SC-62
JEDEC: SOT-89

MAXIMUM RATING ($T_a=25^\circ\text{C}$)

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 ($T_a=25^\circ\text{C}$)	500	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 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	$V_{CE}=5V$, $I_C=100\mu A$	0.3	—	—	V
h_{FE1}	DC forward current gain1	$V_{CE}=2V$, $I_C=0.1A$	80	—	—	—
h_{FE2}	DC forward current gain2	$V_{CE}=2V$, $I_C=0.5A$	200	—	—	—
h_{FE3}	DC forward current gain3	$V_{CE}=2V$, $I_C=1A$	200	—	—	—
R1	Input resistor	—	0.7	1.0	1.3	$k\Omega$
R2	Emitter-base resistor	—	0.7	1.0	1.3	$k\Omega$



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Keep safety first in your circuit designs!

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