

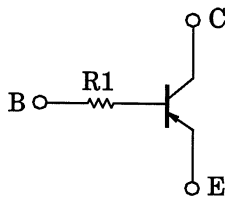
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process) (Bias Resistor Built-in Transistor)

# RN2910,RN2911

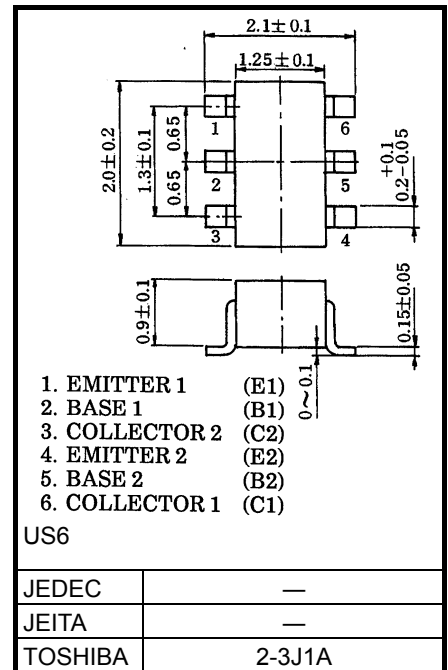
Switching, Inverter Circuit, Interface Circuit and Driver Circuit Applications

- Including two devices in US6 (ultra super mini type with 6 leads)
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1910 and RN1911

## Equivalent Circuit



Unit: mm



Weight: 6.8 mg (typ.)

## Absolute Maximum Ratings (Ta = 25°C) (Q1, Q2 Common)

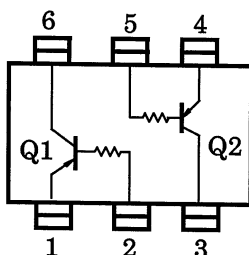
Characteristic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-50	V
Collector-emitter voltage	V <sub>CEO</sub>	-50	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-100	mA
Collector power dissipation	P <sub>C</sub> *	200	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55 to 150	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

\* : Total rating

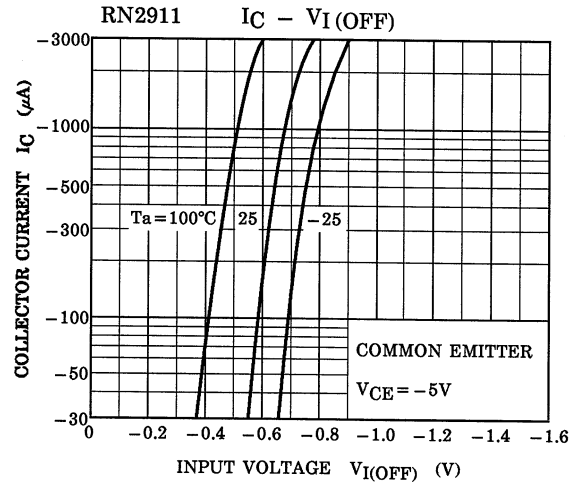
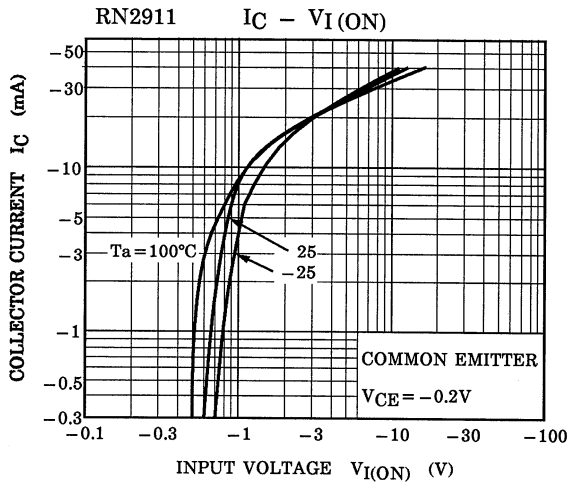
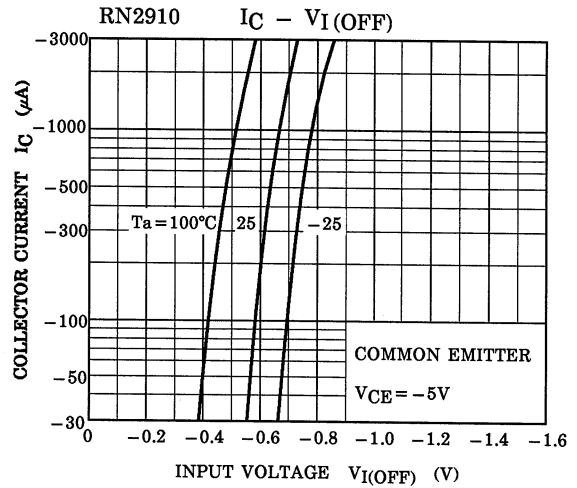
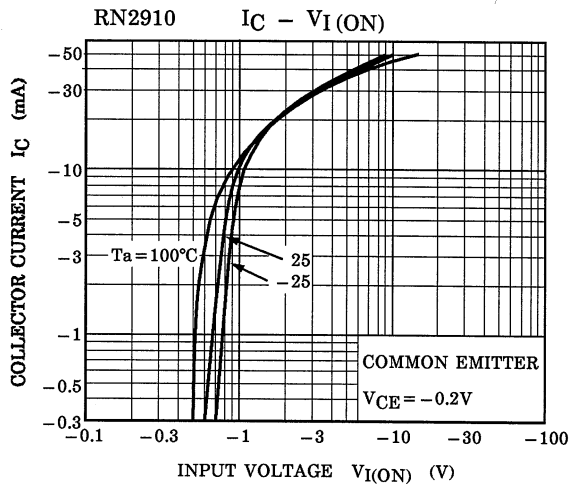
## Equivalent Circuit (Top View)



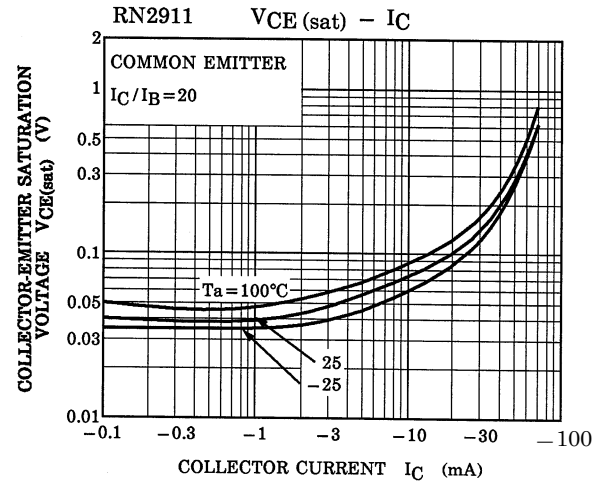
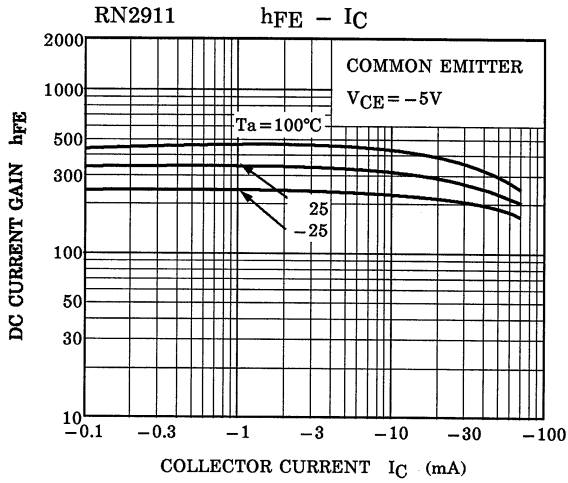
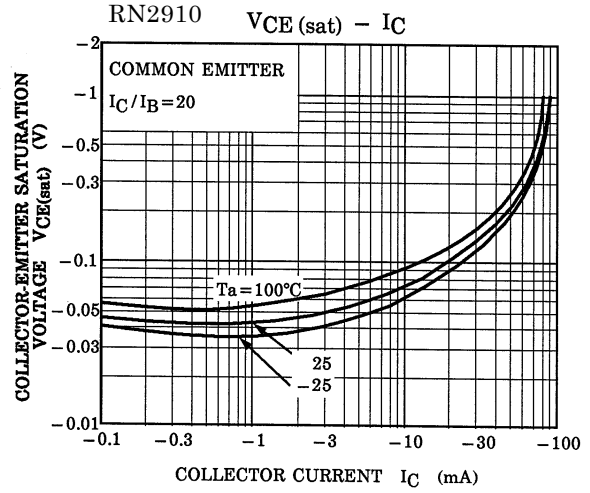
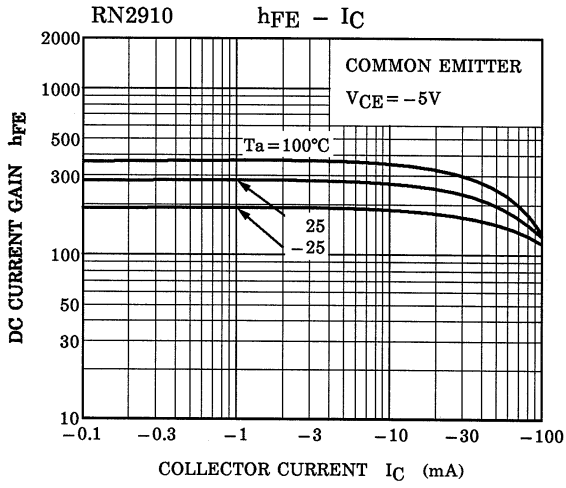
## Electrical Characteristics (Ta = 25°C) (Q1, Q2 Common)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	—	$V_{CB} = -50V, I_E = 0$	—	—	-100	nA
Emitter cut-off current	$I_{EBO}$	—	$V_{EB} = -5V, I_C = 0$	—	—	-100	nA
DC current gain	$h_{FE}$	—	$V_{CE} = -5V, I_C = -1mA$	120	—	400	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V
Transition frequency	$f_T$	—	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector output capacitance	$C_{ob}$	—	$V_{CB} = -10V, I_E = 0V, f = 1MHz$	—	3	6	pF
Input resistor	RN2910	R1	—	3.29	4.7	6.11	kΩ
	RN2911			7	10	13	

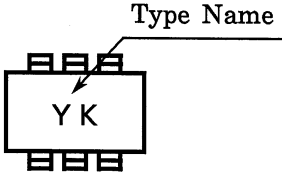
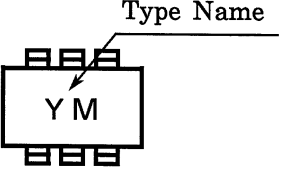
(Q1, Q2 Common)



(Q1, Q2 Common)



**Marking**

Type Name	Marking
RN2910	 <p>The diagram shows a rectangular component with four pins on each of the top and bottom edges. The letters 'YK' are printed in the center. An arrow points from the text 'Type Name' above to the 'Y' in 'YK'.</p>
RN2911	 <p>The diagram shows a rectangular component with four pins on each of the top and bottom edges. The letters 'YM' are printed in the center. An arrow points from the text 'Type Name' above to the 'Y' in 'YM'.</p>

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