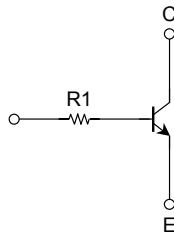


TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process) (Transistor with Built-in Bias Resistor)

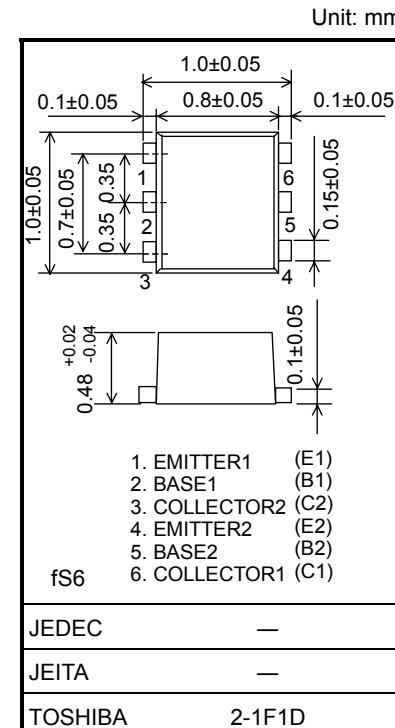
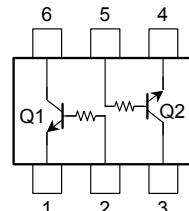
**RN1910AFS, RN1911AFS**Switching, Inverter Circuit, Interface Circuit and  
Driver Circuit Applications

- Two devices are incorporated into a fine-pitch, small-mold (6-pin) package.
- Incorporating a bias resistor into a transistor reduces the parts count. Reducing the parts count enables the manufacture of ever more compact equipment and lowers assembly costs.
- Complementary to the RN2910AFS/RN2911AFS
- Lead (Pb) free

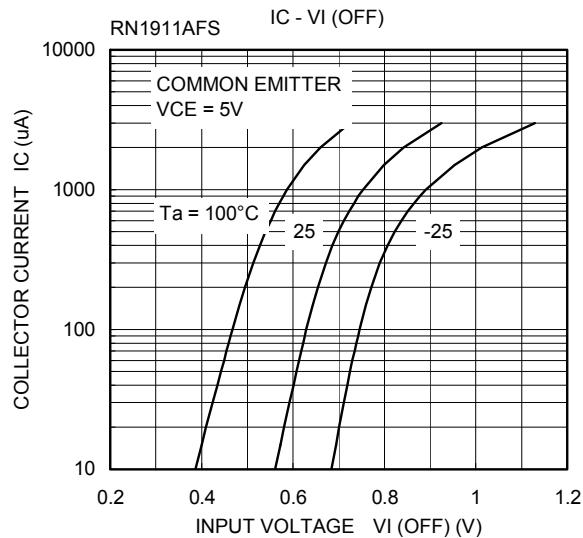
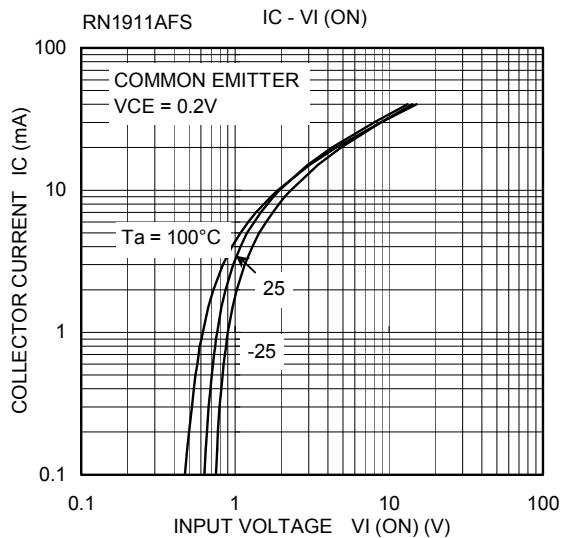
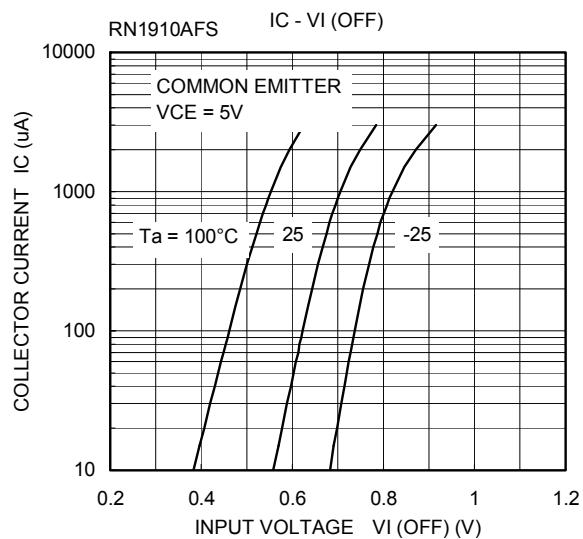
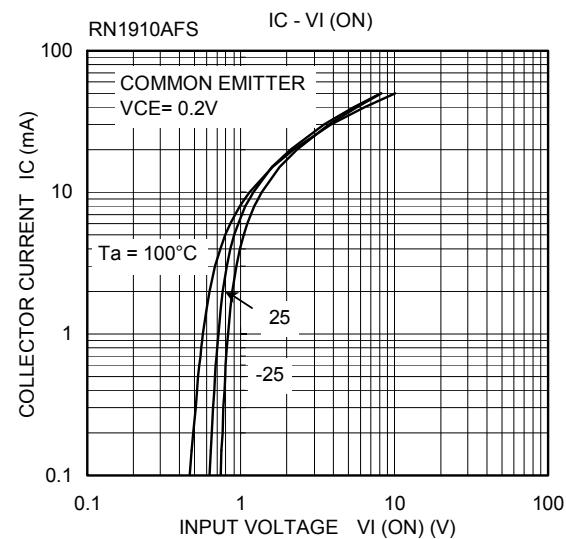
**Equivalent Circuit and Bias Resistor Values****Maximum Ratings (Ta = 25°C) (Q1, Q2 common)**

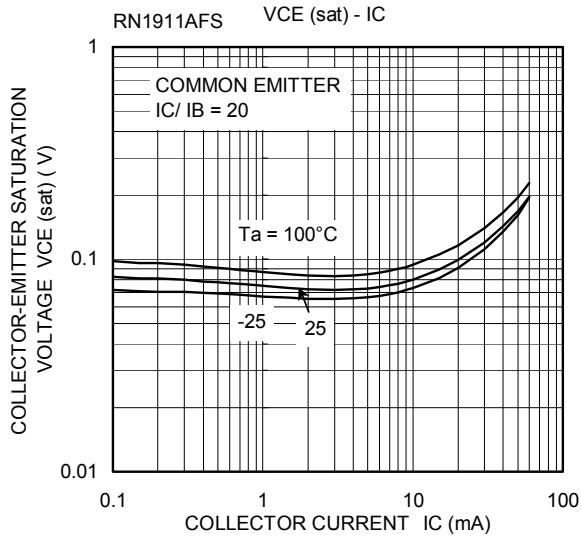
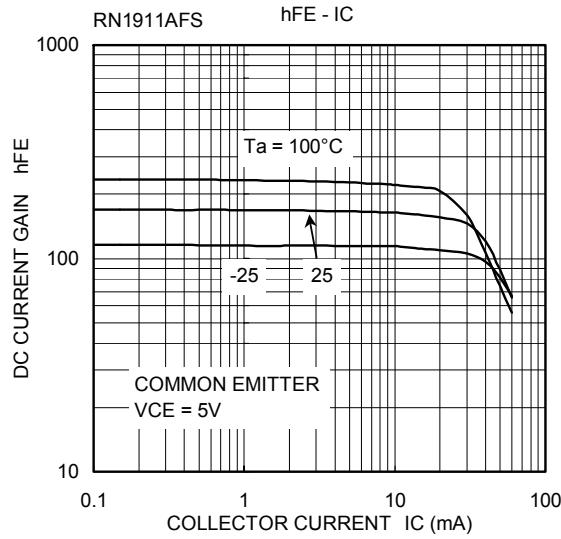
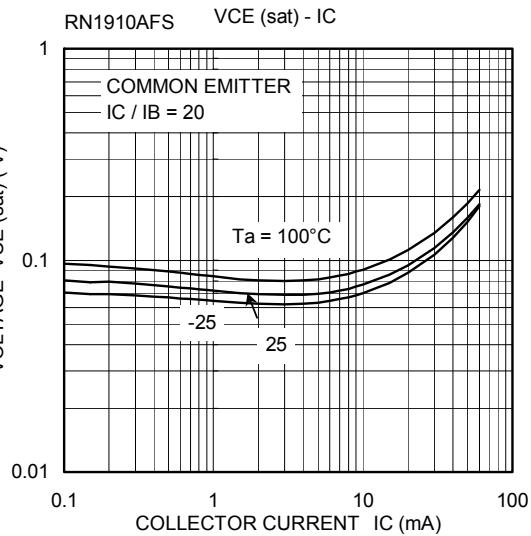
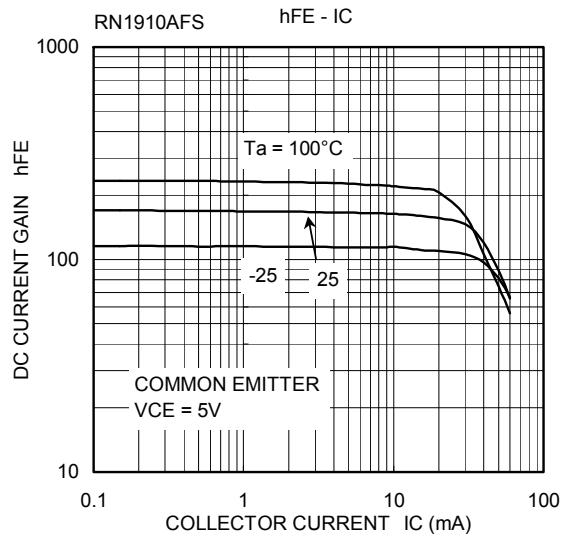
Characteristic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	80	mA
Collector power dissipation	P <sub>C</sub> (Note)	50	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

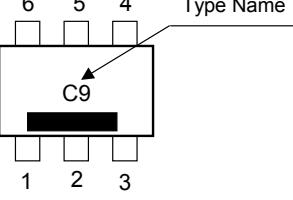
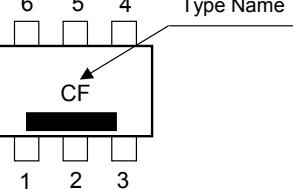
Note: Total rating

**Equivalent Circuit  
(top view)****Electrical Characteristics (Ta = 25°C) (Q1, Q2 common)**

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0	—	—	100	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	—	—	100	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 mA	120	—	700	—
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 5 mA, I <sub>B</sub> = 0.25 mA	—	—	0.15	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	—	0.7	—	pF
Input resistor	RN1910AFS	R1	—	3.76	4.7	5.64
	RN1911AFS			8	10	12
						kΩ





Type Name	Marking
RN1910AFS	 <p>Diagram showing the marking for RN1910AFS. The marking consists of the characters 'C9' in a bold, black, horizontal rectangular box. Above the box are the numbers '6', '5', and '4' arranged in a descending staircase pattern. Below the box are the numbers '1', '2', and '3' arranged in an ascending staircase pattern. An arrow points from the text 'Type Name' to the 'C9' marking.</p>
RN1911AFS	 <p>Diagram showing the marking for RN1911AFS. The marking consists of the characters 'CF' in a bold, black, horizontal rectangular box. Above the box are the numbers '6', '5', and '4' arranged in a descending staircase pattern. Below the box are the numbers '1', '2', and '3' arranged in an ascending staircase pattern. An arrow points from the text 'Type Name' to the 'CF' marking.</p>

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