

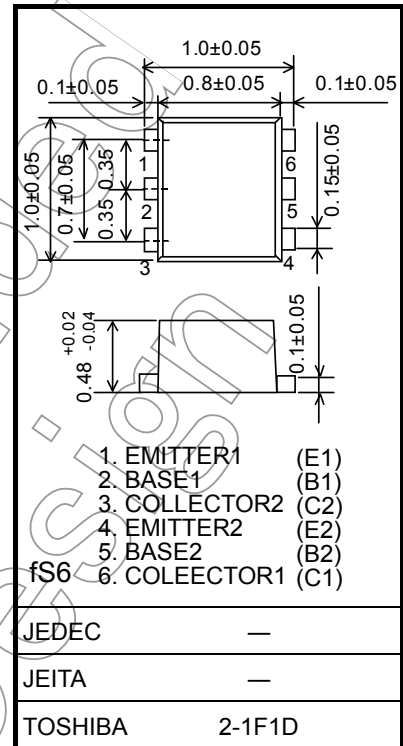
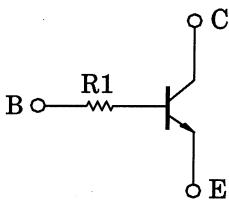
RN1910FS,RN1911FS

Switching, Inverter Circuit, Interface Circuit and Driver Circuit Applications

Unit: mm

- Two devices are incorporated into a fine pitch small mold (6-pin) package.
- Incorporating a bias resistor into a transistor reduces parts count.
- Reducing the parts count enables the manufacture of ever more compact equipment and lowers assembly cost.
- Complementary to RN2910FS, RN2911FS

Equivalent Circuit and Bias Resistor Values



Weight: 0.001g (typ.)

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

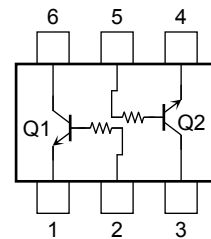
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	20	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	50	mA
Collector power dissipation	P_C (Note 1)	50	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

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).

Note 1: Total rating

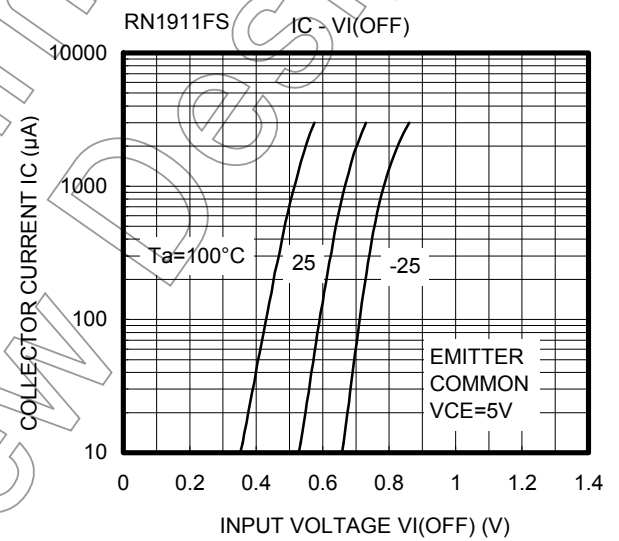
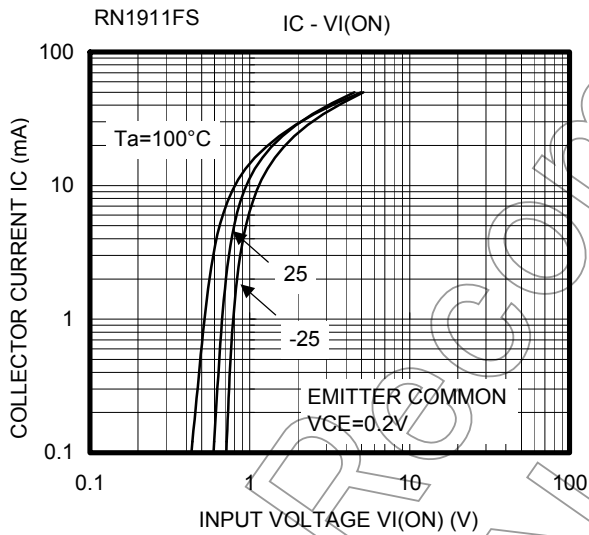
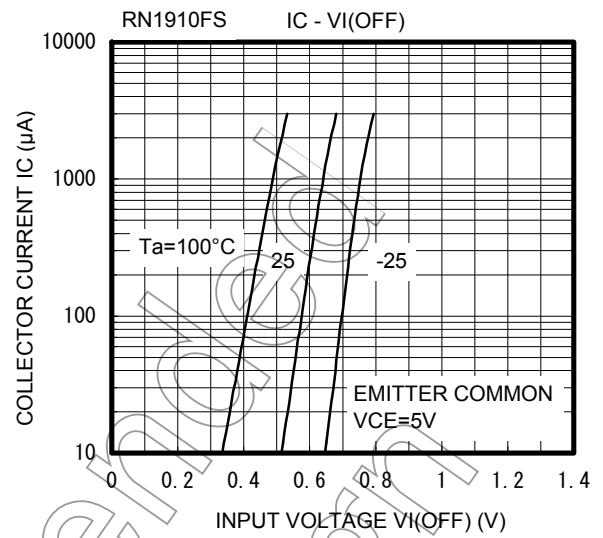
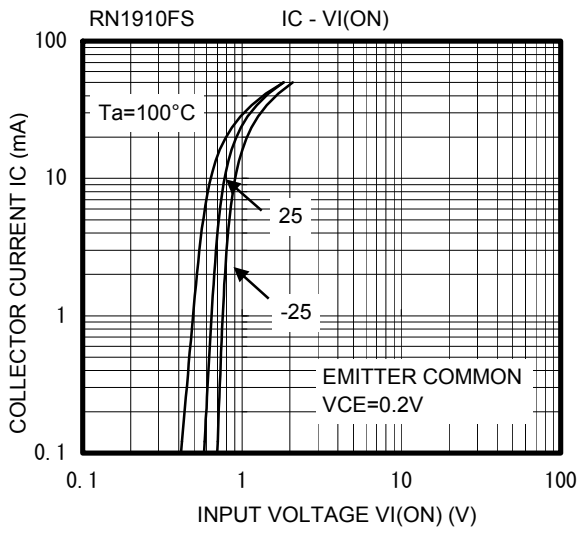
Equivalent Circuit (top view)



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

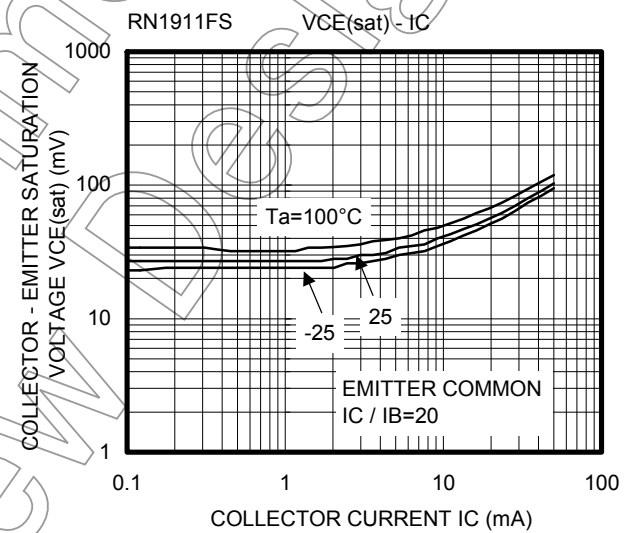
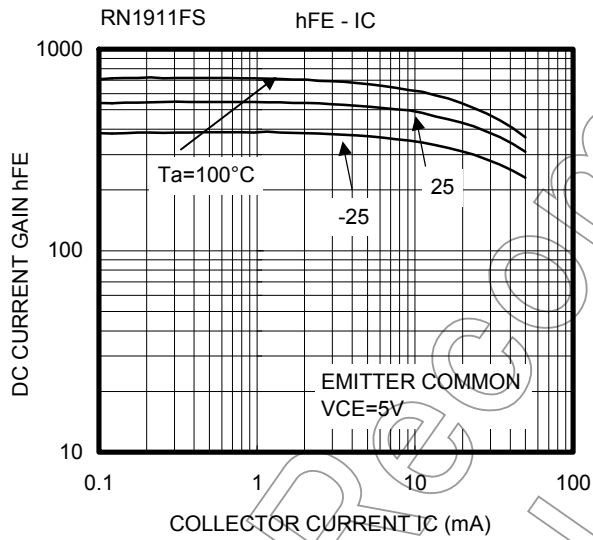
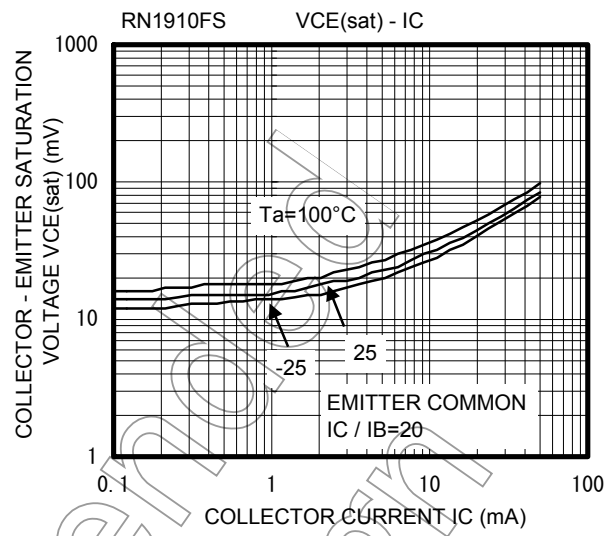
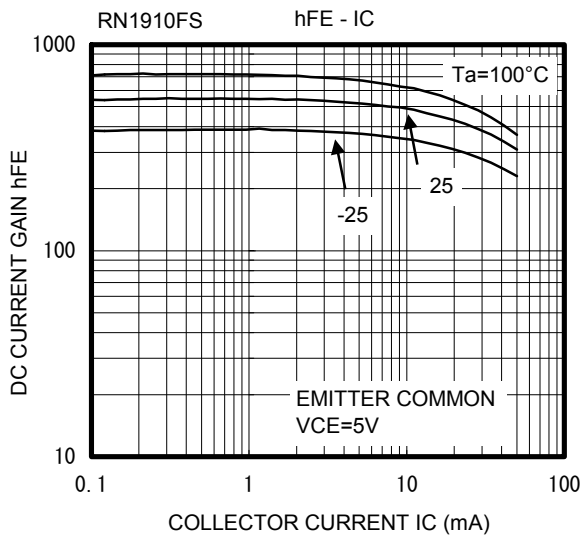
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit	
Collector cut-off current	I_{CBO}	$V_{CB} = 20\text{ V}, I_E = 0$	—	—	100	nA	
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	nA	
DC current gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$	300	—	—		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{ mA}, I_B = 0.25\text{ mA}$	—	—	0.15	V	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	1.2	—	pF	
Input resistor	RN1910FS	R1	—	3.76	4.7	5.64	kΩ
	RN1911FS			8	10	12	

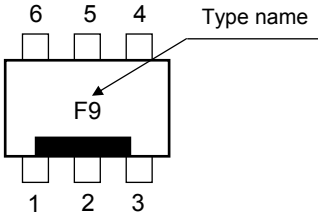
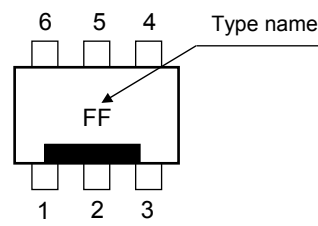
(Q1, Q2 common)



Not for New

(Q1, Q2 common)



Type Name	Marking
RN1910FS	 <p>The diagram shows a rectangular component with six pins. Pins 1, 2, and 3 are at the bottom; pins 4, 5, and 6 are at the top. A black bar is located between pins 1 and 2. The marking 'F9' is printed on the component, with an arrow pointing to it from the label 'Type name' on the right.</p>
RN1911FS	 <p>The diagram shows a rectangular component with six pins. Pins 1, 2, and 3 are at the bottom; pins 4, 5, and 6 are at the top. A black bar is located between pins 1 and 2. The marking 'FF' is printed on the component, with an arrow pointing to it from the label 'Type name' on the right.</p>

Handling Precaution

When handling individual devices (which are not yet mounted on a circuit board), be sure that the environment is protected against electrostatic discharge. Operators should wear anti-static clothing, and containers and other objects that come into direct contact with devices should be made of anti-static materials.

Not Recommended for New Design

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