

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

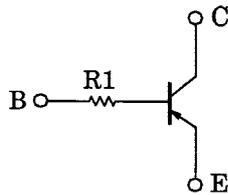
RN2110F,RN2111F

Switching, Inverter Circuit, Interface Circuit and Driver Circuit Applications

Unit : mm

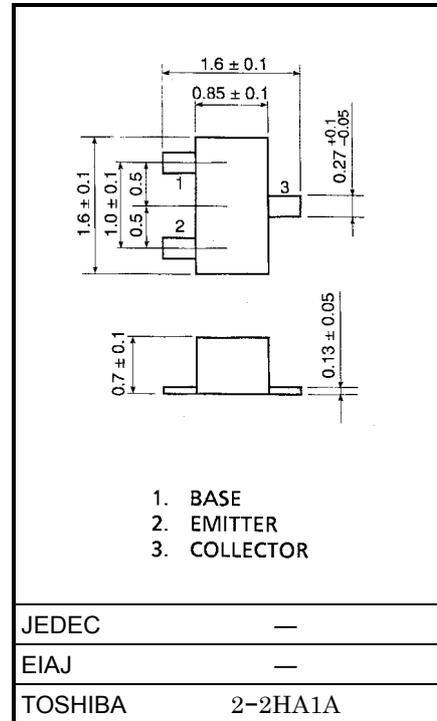
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1110F, RN1111F

Equivalent Circuit



Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C



JEDEC	—
EIAJ	—
TOSHIBA	2-2HA1A

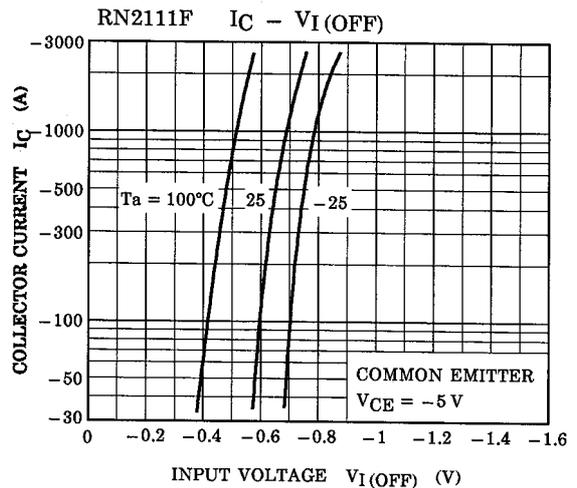
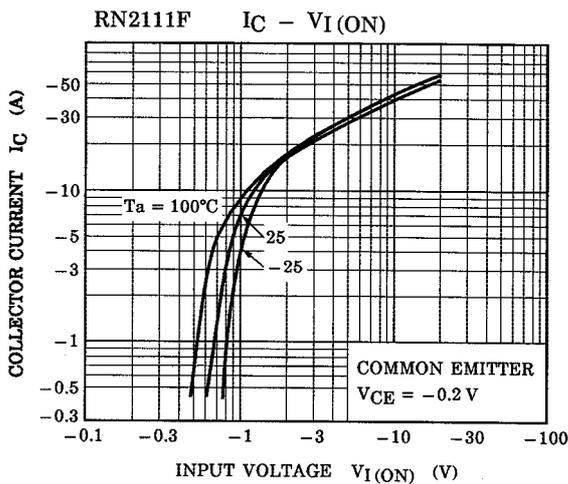
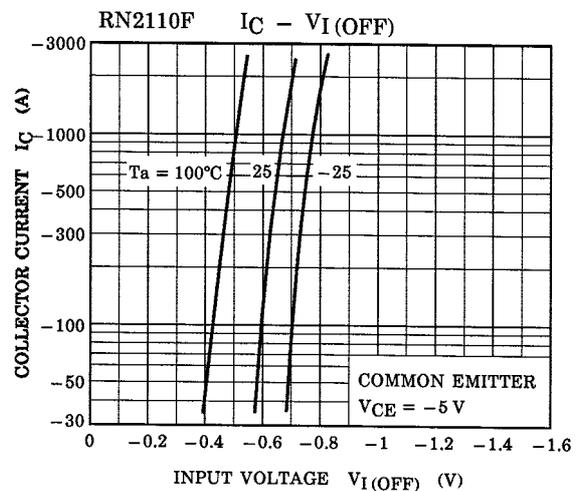
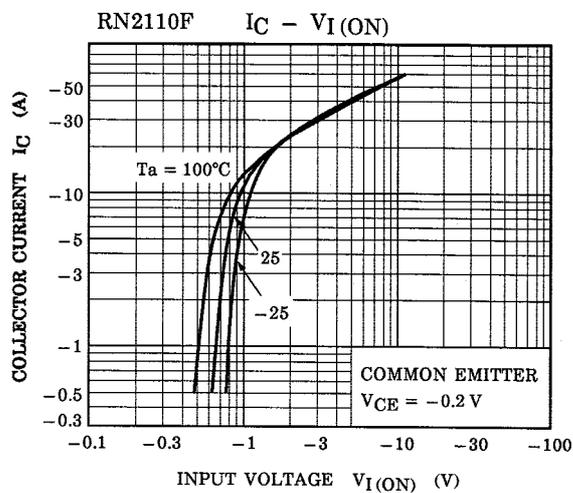
Weight : 2.3mg

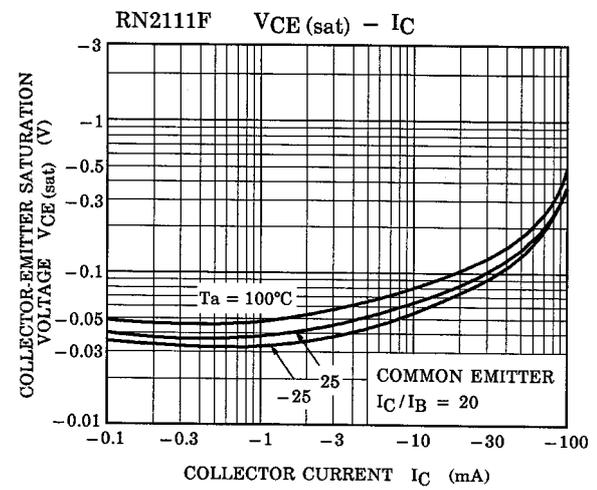
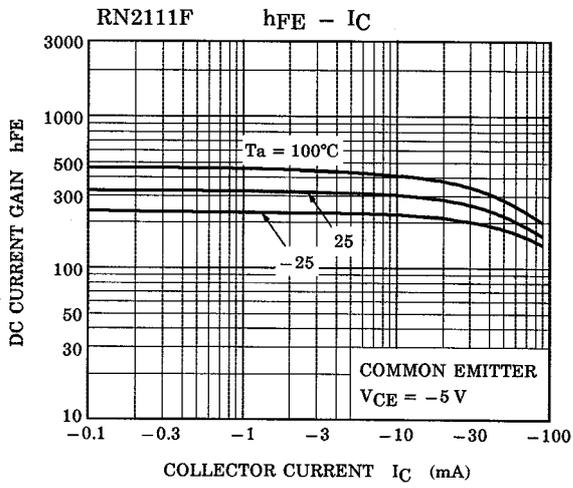
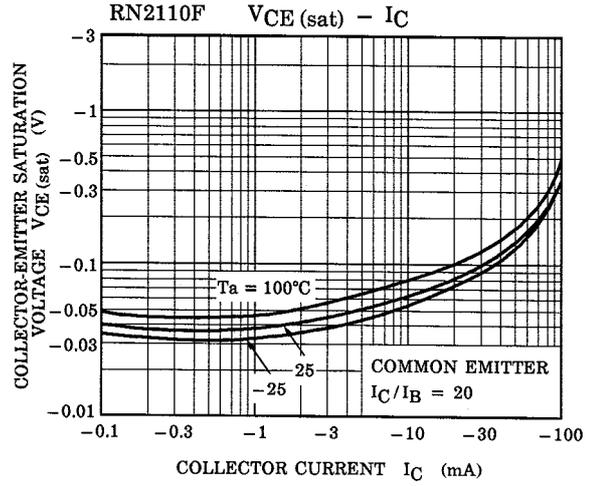
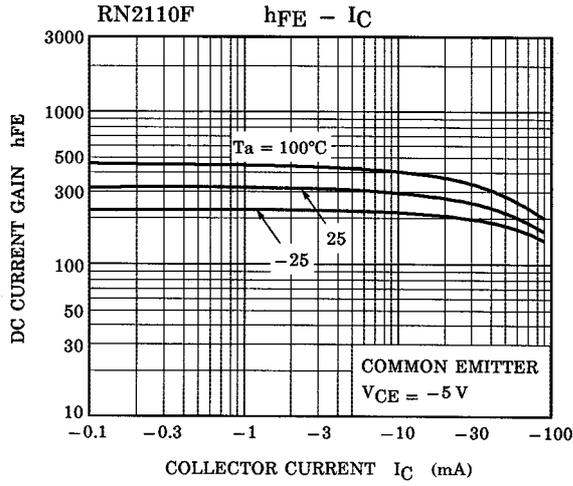
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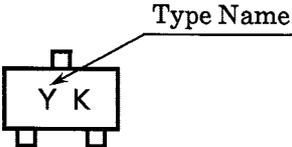
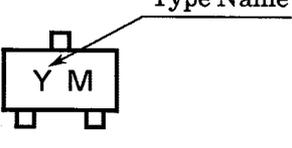
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Electrical Characteristics (Ta = 25°C)

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}	—	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3	6	pF
Input resistor	RN2110F	R1	—	3.29	4.7	6.11	kΩ
	RN2111F			7	10	13	





Type Name	Marking
RN2110F	 A schematic diagram of a component with a rectangular body and four pins. The letters 'Y K' are printed on the body. An arrow points from the text 'Type Name' to the 'Y' character.
RN2111F	 A schematic diagram of a component with a rectangular body and four pins. The letters 'Y M' are printed on the body. An arrow points from the text 'Type Name' to the 'Y' character.