

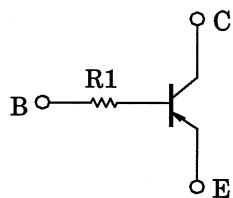
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

# RN2210,RN2211

Switching, Inverter Circuit, Interface Circuit  
And Driver Circuit Applications

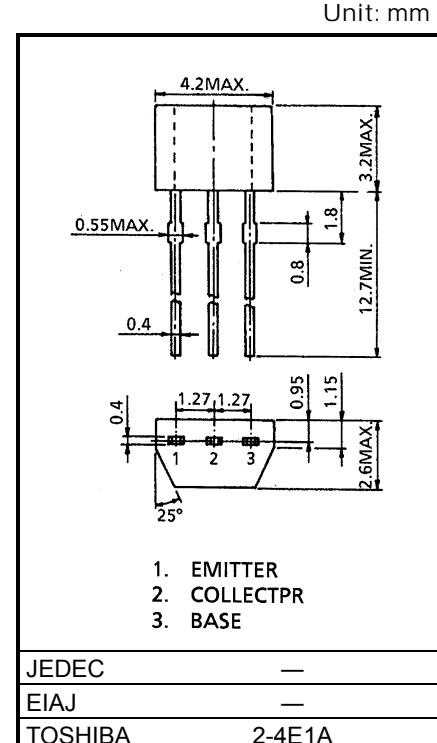
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1210, 1211

## Equivalent Circuit



## Maximum Ratings (Ta = 25°C)

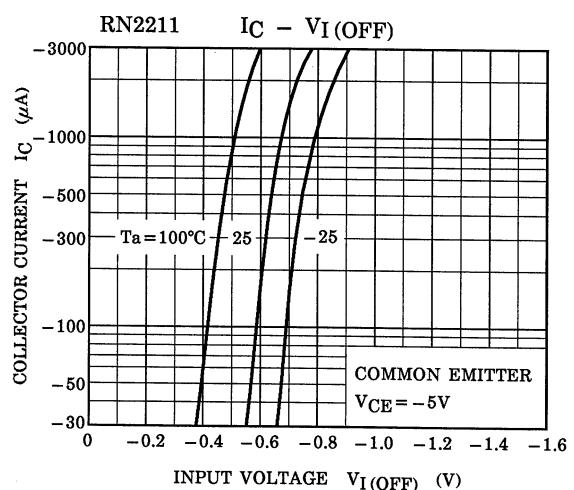
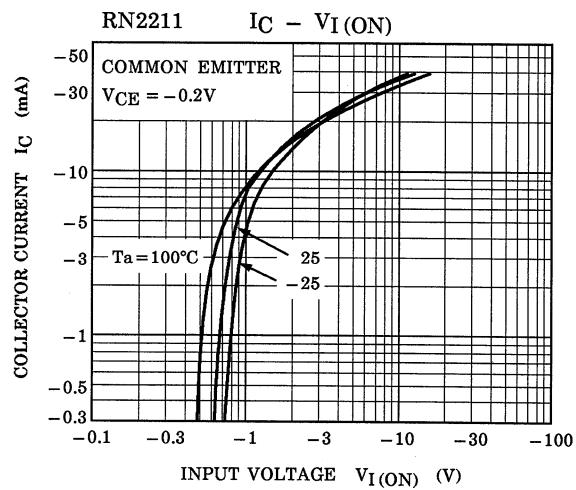
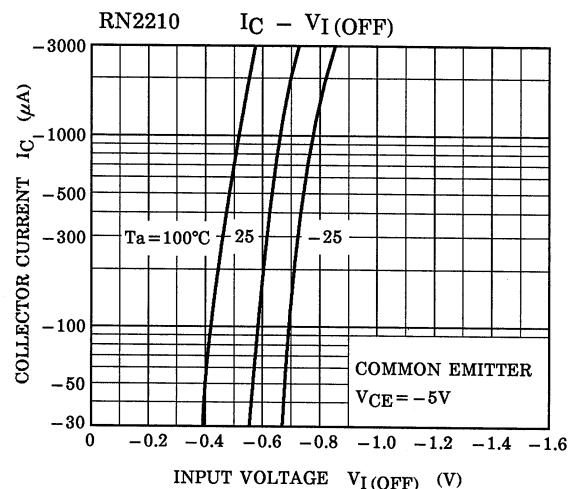
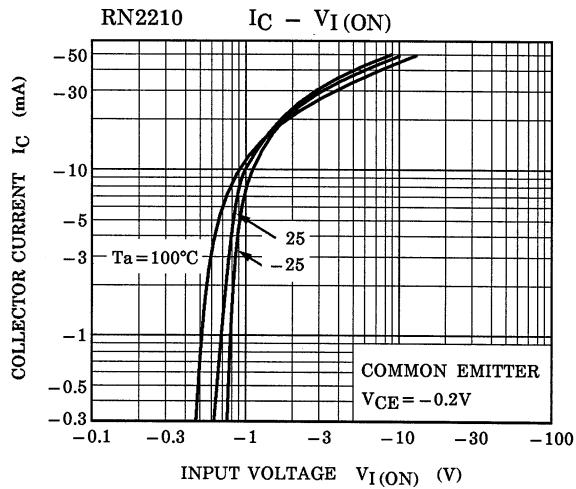
Characterisstic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-50	V
Collector-emitter voltage	V <sub>CEO</sub>	-50	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-100	mA
Collector power dissipation	P <sub>C</sub>	300	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

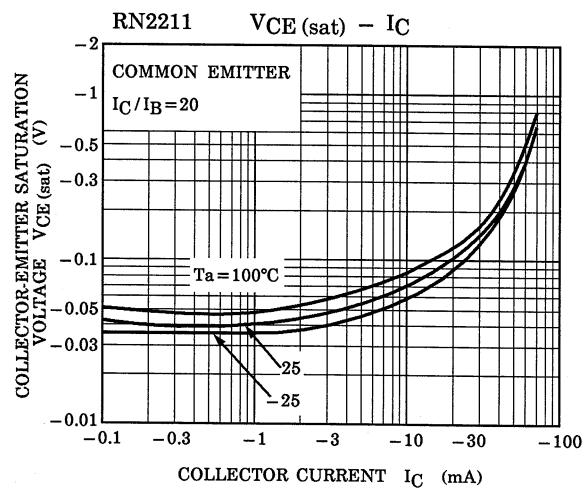
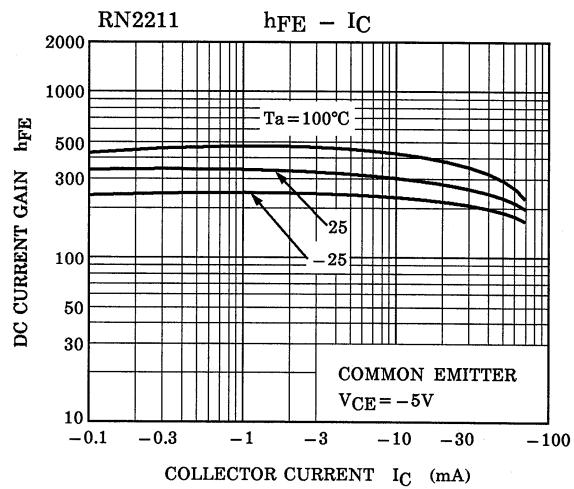
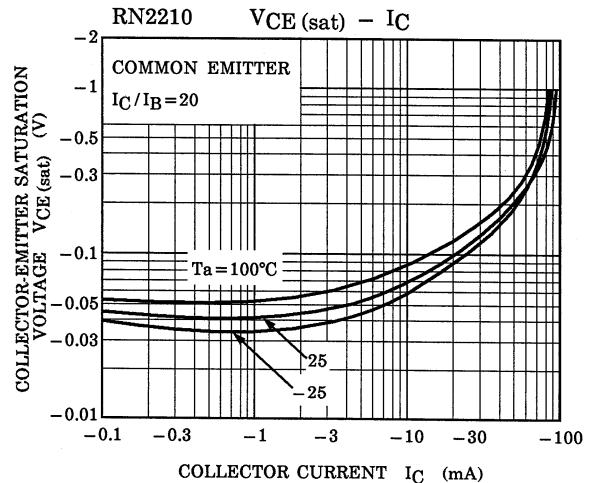
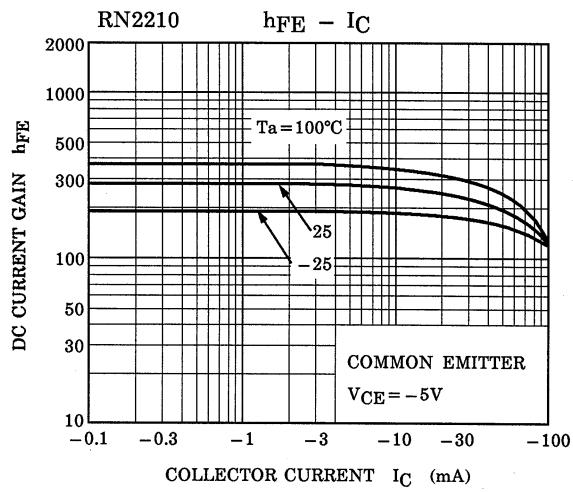


Weight: 0.13g

## 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	$V_{CE} (\text{sat})$	—	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V	
Translation 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	RN2210	R1	—	—	3.29	4.7	6.11	kΩ
	RN2211				7	10	13	





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