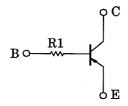
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

# RN2310,RN2311

Switching, Inverter Circuit, Interface Circuit And Driver Circuit Applications

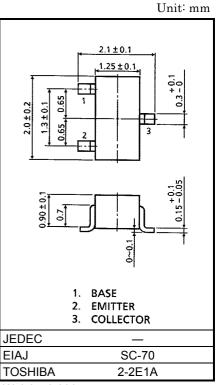
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1310, RN1311

### **Equivalent Circuit**



# **Maximum Ratings (Ta = 25°C)**

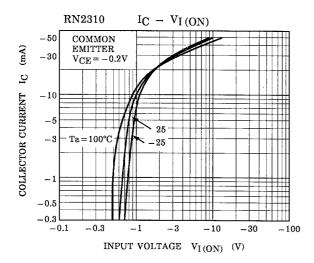
Characterisstic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-50	V
Collector-emitter voltage	V <sub>CEO</sub>	-50	V
Emitter-base voltage	V <sub>EBO</sub>	-5	٧
Collector current	Ic	-100	mA
Collector power dissipation	PC	100	mW
Junction temperature	Tj	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

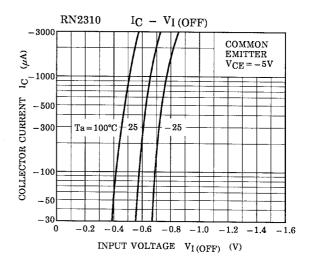


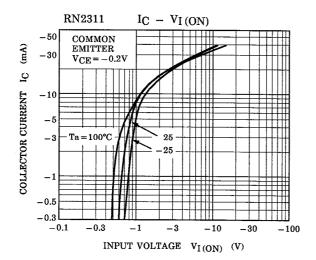
Weight: 0.006g

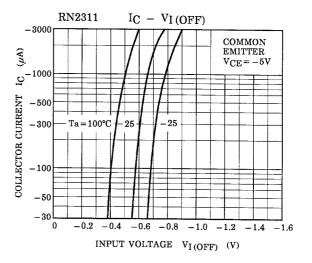
## **Electrical Characteristics (Ta = 25°C)**

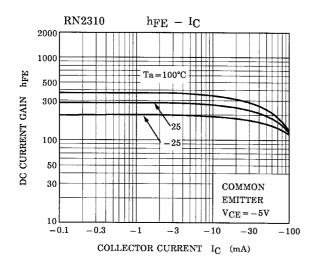
Characteristic		Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current		I <sub>CBO</sub>	_	$V_{CB} = -50V, I_{E} = 0$	_	_	-100	nA
Emitter cut-off current		I <sub>EBO</sub>	_	$V_{EB} = -5V, I_C = 0$	_	_	-100	nA
DC current gain		h <sub>FE</sub>	_	$V_{CE} = -5V, I_{C} = -1mA$	120	_	400	_
Collector-emitter saturation voltage		V <sub>CE (sat)</sub>	_	$I_C = -5mA$ , $I_B = -0.25mA$	_	-0.1	-0.3	V
Translation Frequency		f <sub>T</sub>		$V_{CE} = -10V, I_{C} = -5mA$	1	200		MHz
Collector output capacitance		C <sub>ob</sub>	_	V <sub>CB</sub> = −10V, I <sub>E</sub> = 0, f = 1MHz	_	3	6	pF
Input resistor	RN2310	- R1	_	_	3.29	4.7	6.11	kΩ
	RN2311				7	10	13	K12

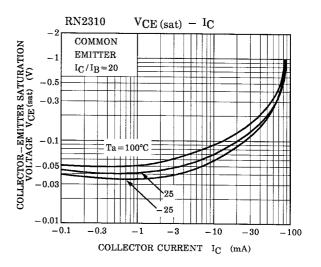


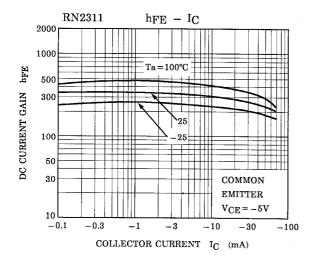


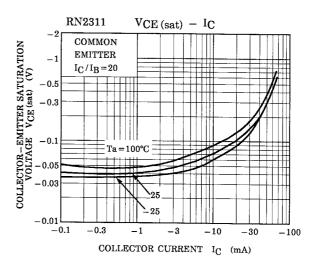












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Type Name	Marking	
RN2310	Type Name Y K	
RN2311	Type Name Y M	

2001-06-07

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