

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process) (Bias Resistor built-in Transistor)

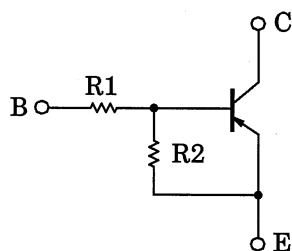
RN2607, RN2608

Unit: mm

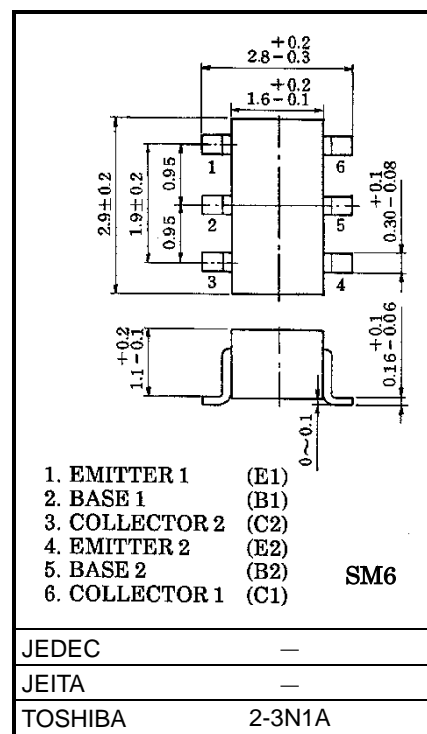
Switching, Inverter Circuit,
Interface Circuit and Driver Circuit

- Including two devices in SM6 (super mini type with 6 leads)
- With built-in bias resistors.
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process and miniaturize equipment.
- Various resistance values are available to suit various circuit designs.
- Complementary to RN1607,RN1608

Equivalent Circuit and Bias Resistor Values

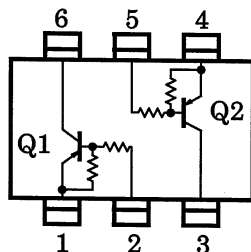


Part No	R1 (kΩ)	R2 (kΩ)
RN2607	10	47
RN2608	22	47



Weight: 0.015 g (typ.)

Internal Circuit (top view)



Start of commercial production
1988-11

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

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V _{CBO}	-50	V
Collector-emitter voltage		V _{CEO}	-50	V
Emitter-base voltage	RN2607	V _{EBO}	-6	V
	RN2608		-7	
Collector current		I _C	-100	mA
Collector power dissipation		P _C *	300	mW
Junction temperature		T _j	150	°C
Storage temperature range		T _{stg}	-55 to 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.

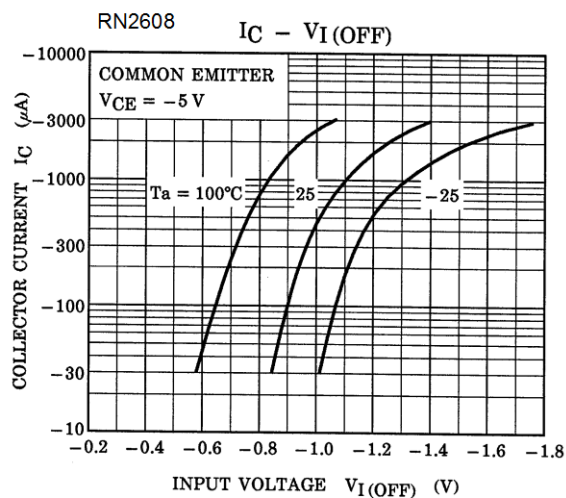
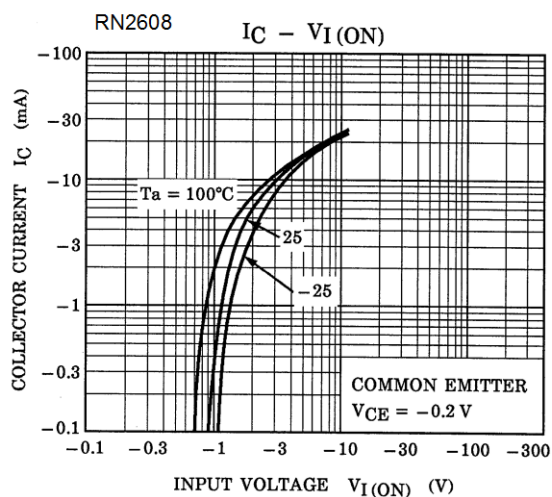
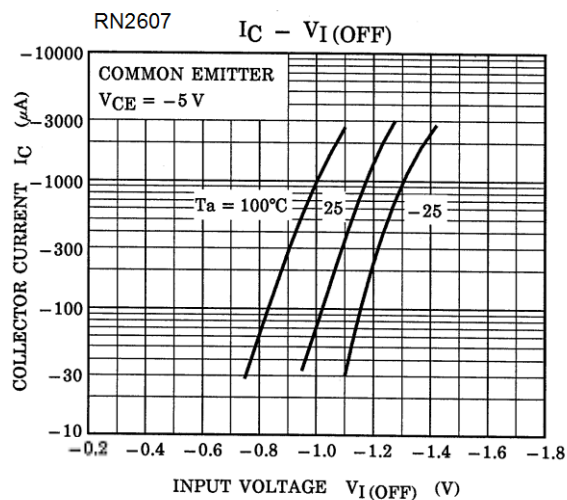
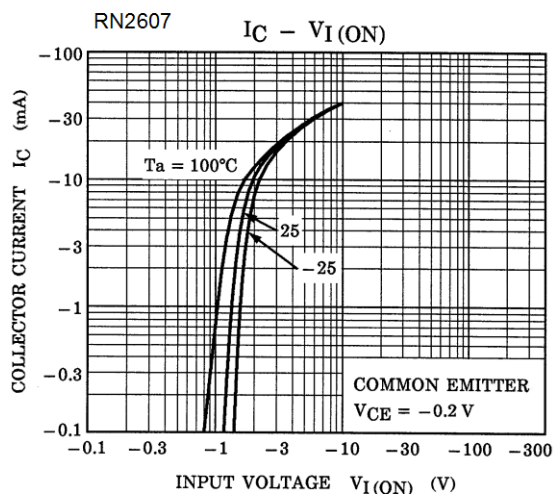
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

* Total rating

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

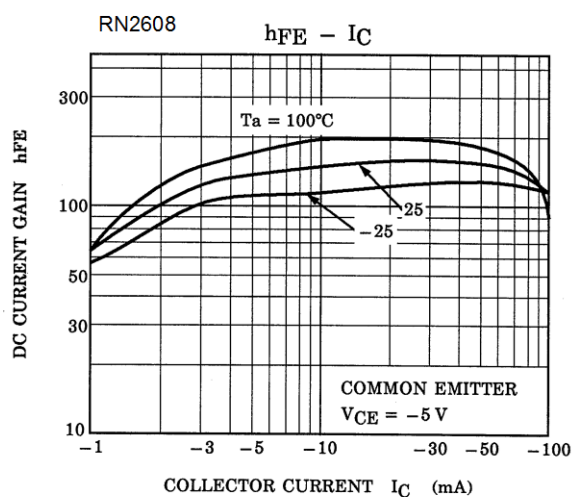
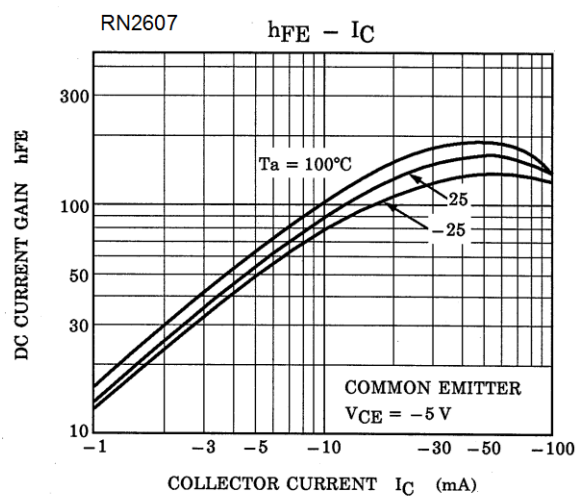
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I _{CBO}	V _{CB} = -50 V, I _E = 0 mA	—	—	-100	nA
		I _{CEO}	V _{CE} = -50 V, I _B = 0 mA	—	—	-500	nA
Emitter cut-off current	RN2607	I _{EBO}	V _{EB} = -6 V, I _C = 0 mA	-0.081	—	-0.15	mA
	RN2608		V _{EB} = -7 V, I _C = 0 mA	-0.078	—	-0.145	
DC current gain	RN2607	h _{FE}	V _{CE} = -5 V, I _C = -10 mA	80	—	—	—
	RN2608			80	—	—	
Collector-emitter saturation voltage		V _{CE (sat)}	I _C = -5 mA, I _B = -0.25 mA	—	-0.1	-0.3	V
Input voltage (ON)	RN2607	V _{I (ON)}	V _{CE} = -0.2 V, I _C = -5 mA	-0.7	—	-1.8	V
	RN2608			-1.0	—	-2.6	
Input voltage (OFF)	RN2607	V _{I (OFF)}	V _{CE} = -5 V, I _C = -0.1 mA	-0.5	—	-1.0	V
	RN2608			-0.6	—	-1.16	
Translation frequency		f _T	V _{CE} = -10 V, I _C = -5 mA	—	200	—	MHz
Collector output capacitance		C _{ob}	V _{CB} = -10 V, I _E = 0 mA, f = 1 MHz	—	3	6	pF
Input resistance	RN2607	R _I	—	7	10	13	kΩ
	RN2608			15.4	22	28.6	
Resistance ratio	RN2607	R _{1/R2}	—	0.191	0.213	0.232	—
	RN2608			0.421	0.468	0.515	

Characteristics curves (Q1, Q2 Common)



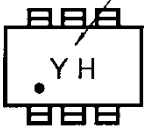
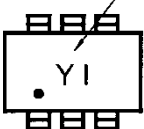
The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

Characteristics curves (Q1, Q2 Common)



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Marking

Part No	Marking
RN2607	<p>Part No.(abbreviation code)</p> 
RN2608	<p>Part No.(abbreviation code)</p> 

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