

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

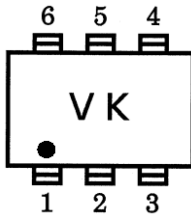
Characteristic	Symbol	Rating	Unit
Collector power dissipation	P _C *	300	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55 to 150	°C

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.

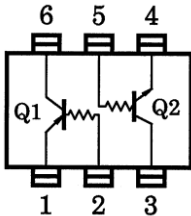
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

* Total rating

Marking



Equivalent Circuit (Top View)



Q1 Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	—	V _{CB} = -50 V, I _E = 0 mA	—	—	-100	nA
Emitter cut-off current	IEBO	—	V _{EB} = -5 V, I _C = 0 mA	—	—	-100	nA
DC current gain	h _{FE}	—	V _{CE} = -5 V, I _C = -1 mA	120	—	400	—
Collector-emitter saturation voltage	V _{CE (sat)}	—	I _C = -5 mA, I _B = -0.25 mA	—	-0.1	-0.3	V
Transition 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

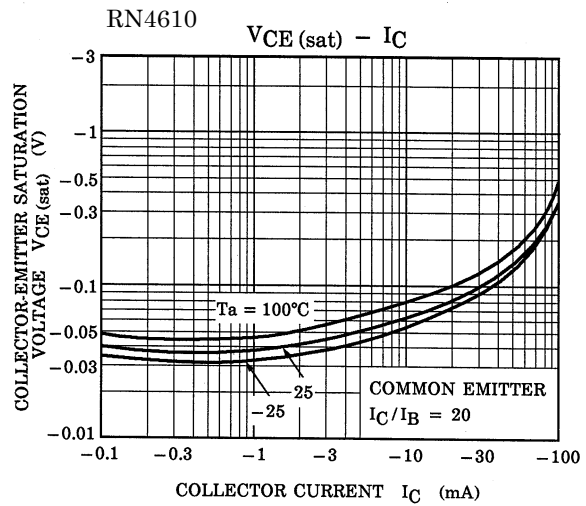
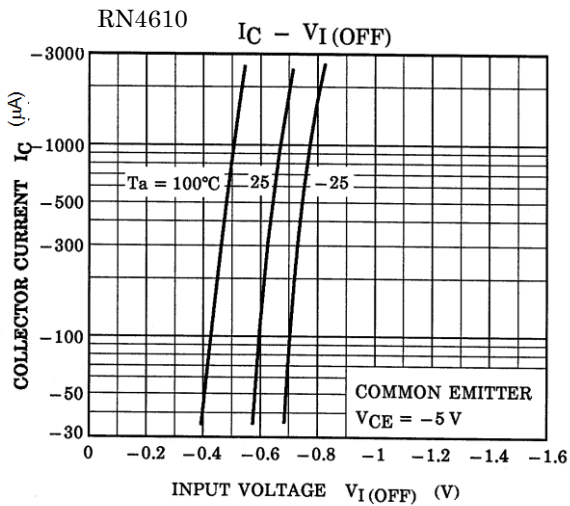
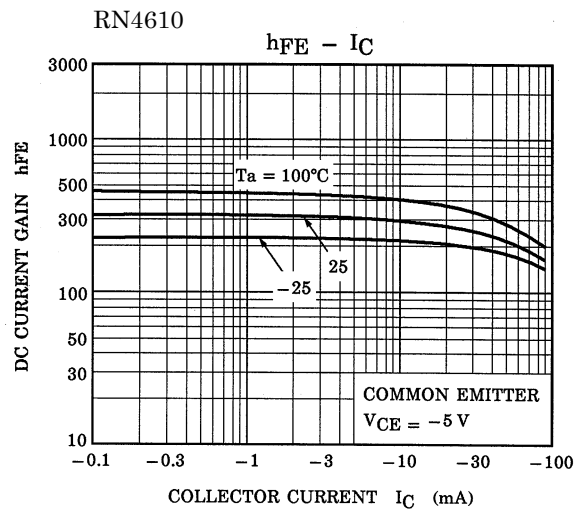
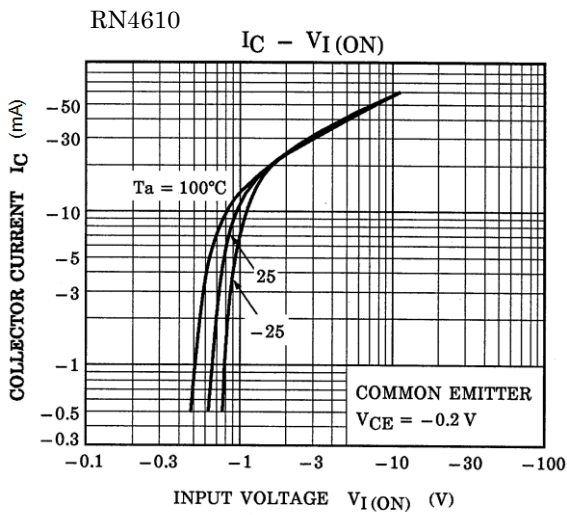
Q2 Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	—	V _{CB} = 50 V, I _E = 0 mA	—	—	100	nA
Emitter cut-off current	IEBO	—	V _{EB} = 5 V, I _C = 0 mA	—	—	100	nA
DC current gain	h _{FE}	—	V _{CE} = 5 V, I _C = 1 mA	120	—	700	—
Collector-emitter saturation voltage	V _{CE (sat)}	—	I _C = 5 mA, I _B = 0.25 mA	—	0.1	0.3	V
Transition frequency	f _T	—	V _{CE} = 10 V, I _C = 5 mA	—	250	—	MHz
Collector output capacitance	C _{ob}	—	V _{CB} = 10 V, I _E = 0 mA, f = 1 MHz	—	3	6	pF

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

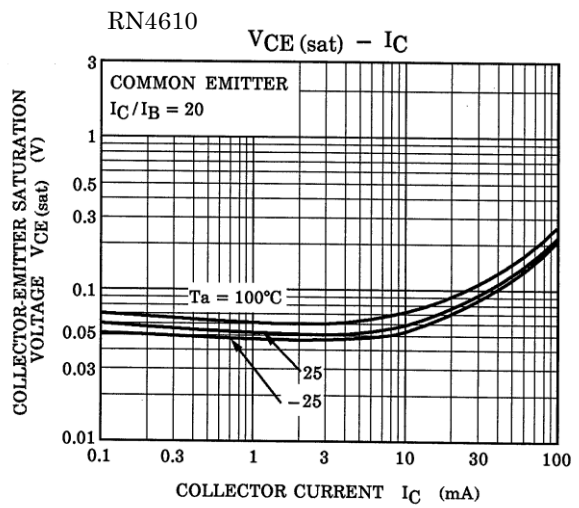
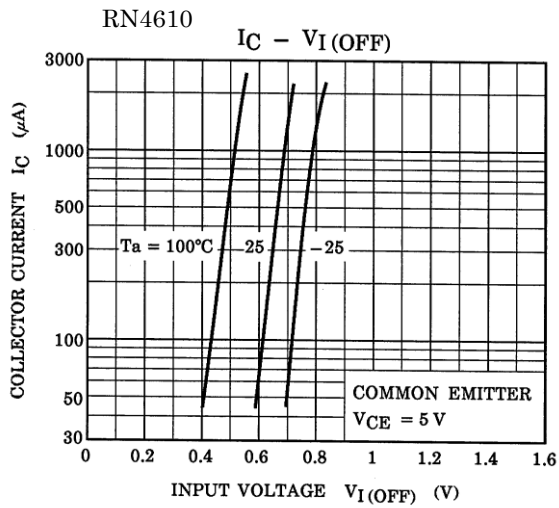
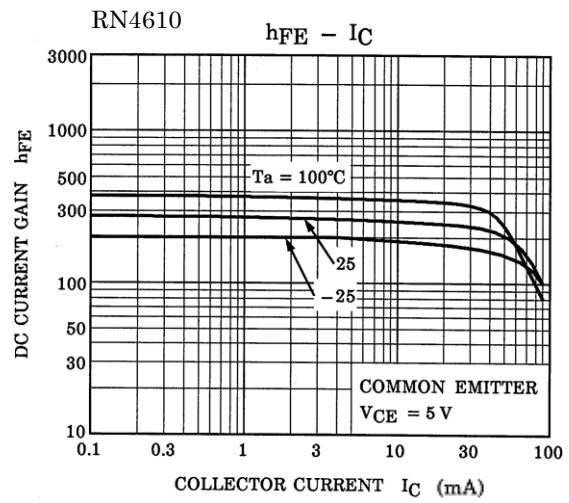
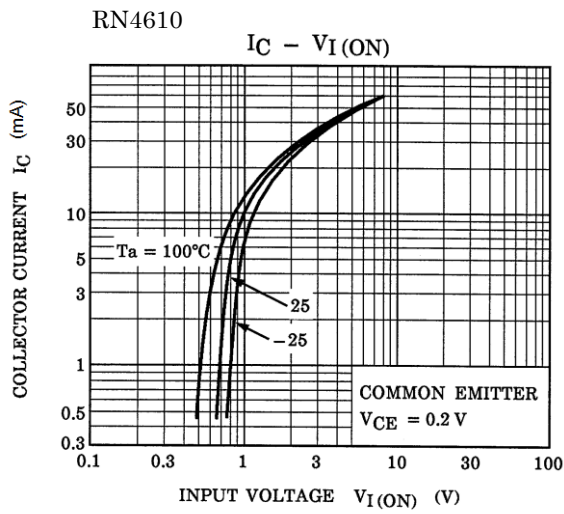
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Input resistance	R ₁	—	—	3.29	4.7	6.11	kΩ

Q1 characteristics curves



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

Q2 characteristics curves



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

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