

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

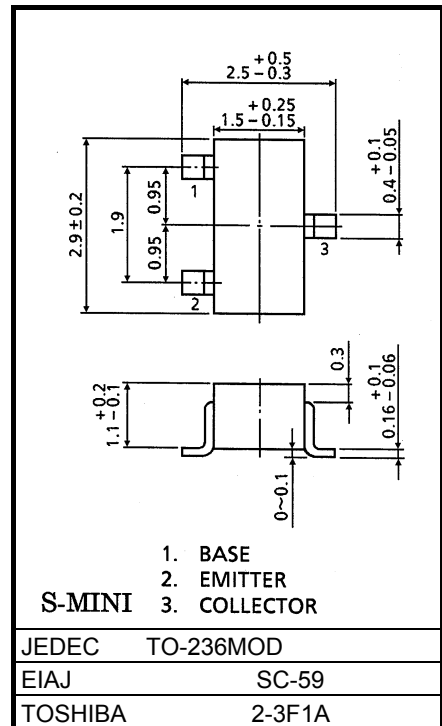
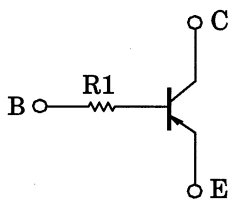
# RN2410, RN2411

Switching, Inverter Circuit, Interface Circuit  
And Driver Circuit Applications

Unit: mm

- With built-in bias resistors
- Simplified circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1410, RN1411

## Equivalent Circuit



Weight: 0.012g

## Absolute Maximum Ratings (Ta = 25°C)

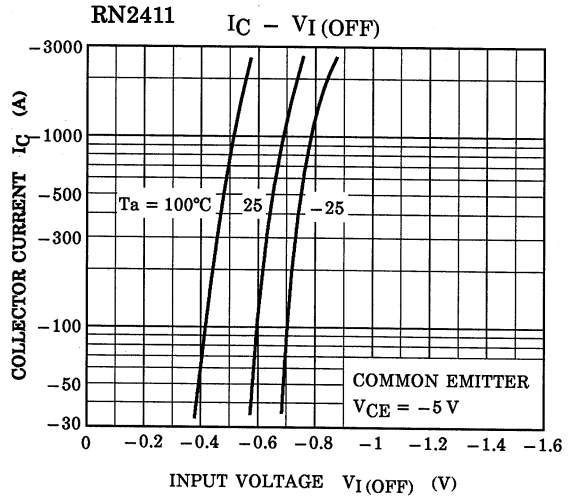
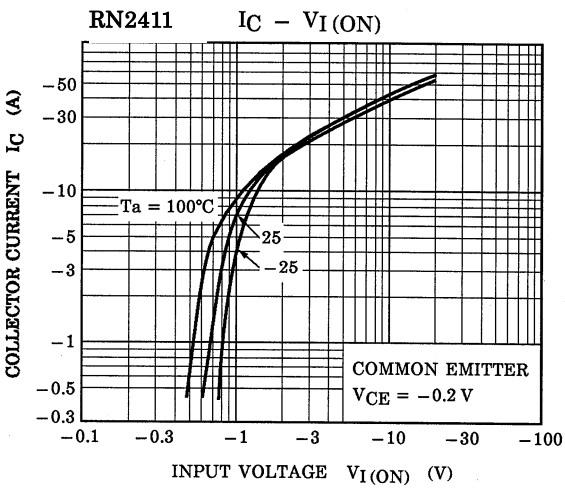
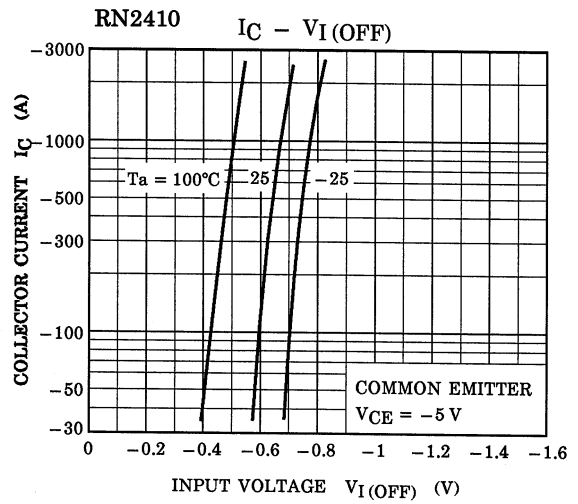
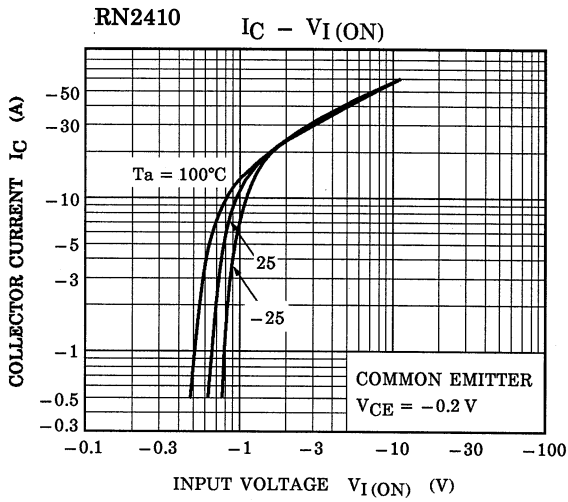
Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-50	V
Collector-emitter voltage	$V_{CEO}$	-50	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55~150	°C

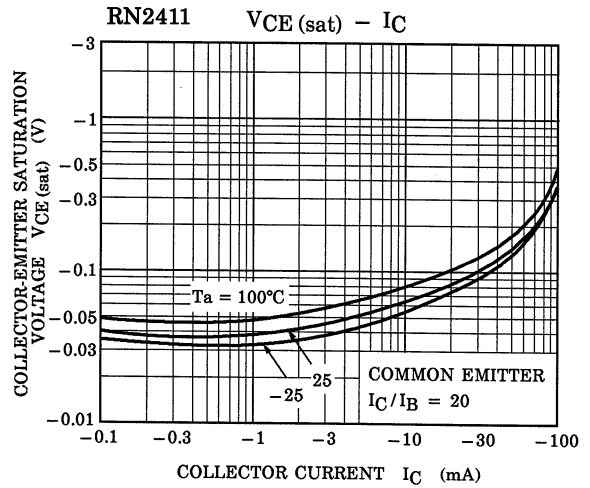
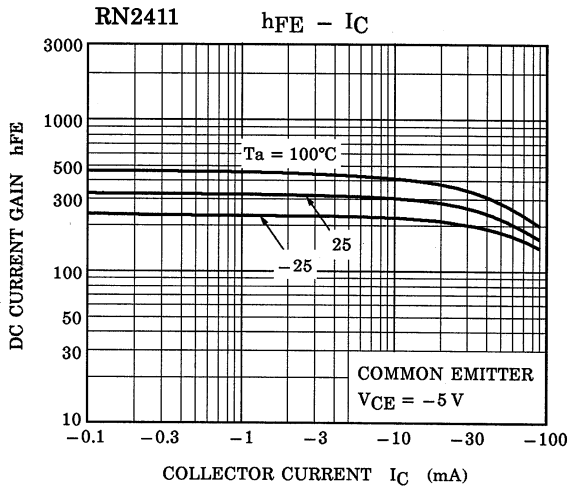
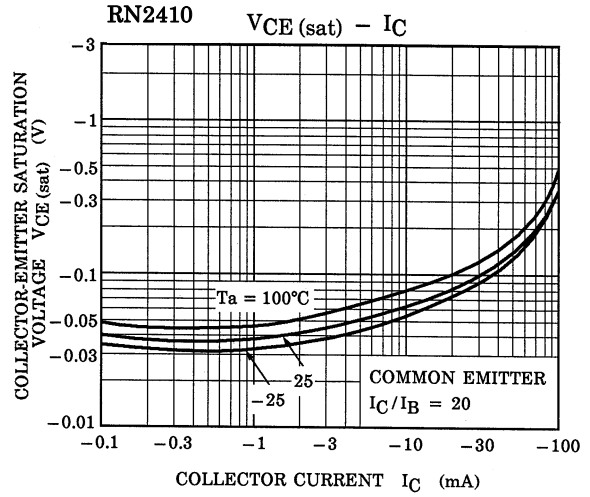
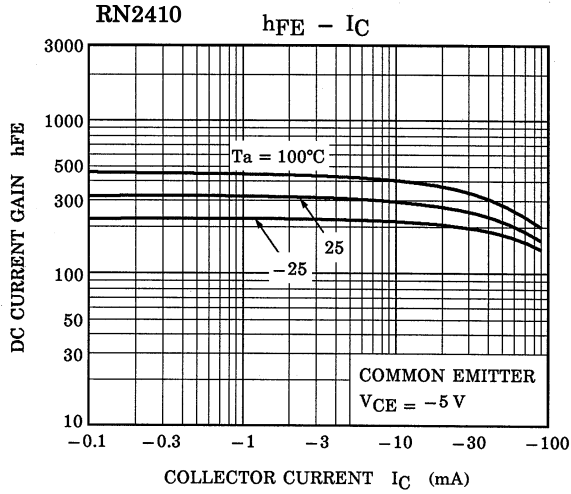
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

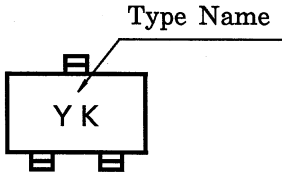
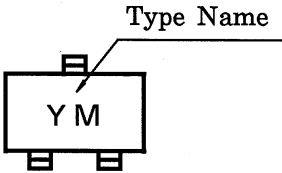
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

## Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	—	$V_{CB} = -50 V, I_E = 0$	—	—	-100	nA
Emitter cut-off current	$I_{EBO}$	—	$V_{EB} = -5 V, I_C = 0$	—	—	-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	$C_{ob}$	—	$V_{CB} = -10 V, I_E = 0, f = 1 MHz$	—	3	6	pF
Input resistor	RN2410	R1	—	3.29	4.7	6.11	kΩ
	RN2411			7	10	13	





Type Name	Marking
RN2410	 <p>The diagram shows a rectangular component with two pins at the bottom. A label 'Y K' is centered on the component. A line points from the text 'Type Name' above to the 'Y' in the marking.</p>
RN2411	 <p>The diagram shows a rectangular component with two pins at the bottom. A label 'Y M' is centered on the component. A line points from the text 'Type Name' above to the 'Y' in the marking.</p>

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20070701-EN GENERAL

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

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