

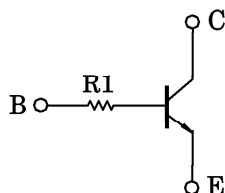
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

RN1710, RN1711

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS.

- Including Two Devices in USV (Ultra Super Mini Type with 5 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN2710~RN2711

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

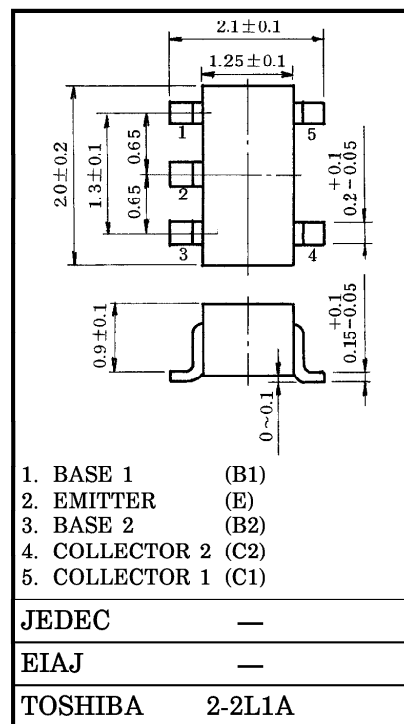
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	100	mA
Collector Power Dissipation	P _C *	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

* : Total Rating

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

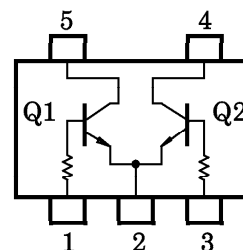
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CB0}	V _{CB} = 50V, I _E = 0	—	—	100	nA
Emitter Cut-off Current	I _{EBO}	V _{EB} = 5V, I _C = 0	—	—	100	nA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 1mA	120	—	700	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 5mA, I _B = 0.25mA	—	0.1	0.3	V
Transition Frequency	f _T	V _{CE} = 10V, I _C = 5mA	—	250	—	MHz
Collector Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	3	6	pF
Input Resistor	RN1710	R1	3.29	4.7	6.11	kΩ
	RN1711		7	10	13	

Unit in mm



Weight : 6.2mg

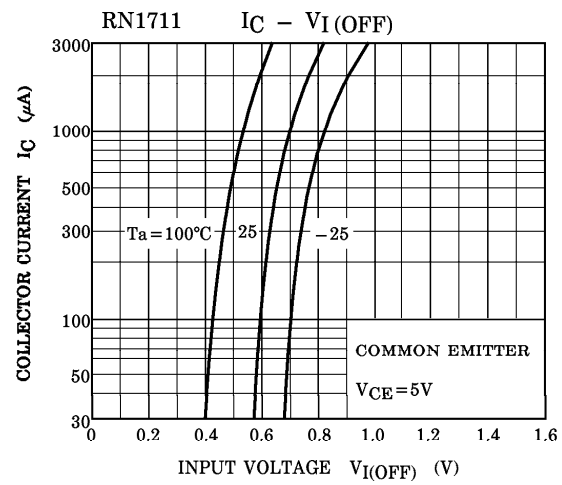
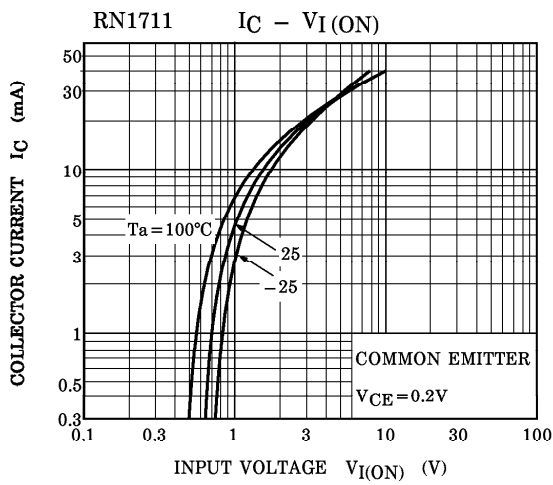
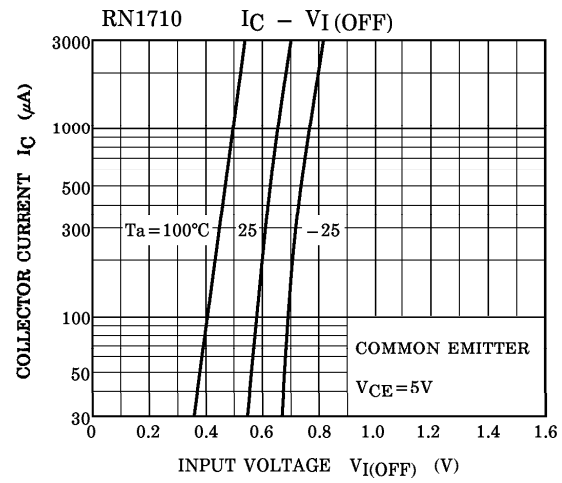
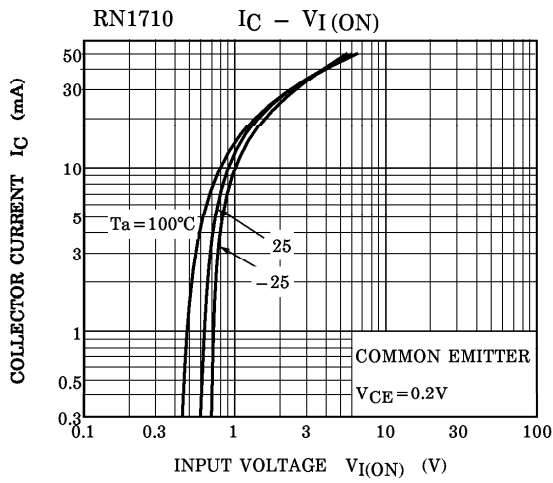
EQUIVALENT CIRCUIT (TOP VIEW)



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● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

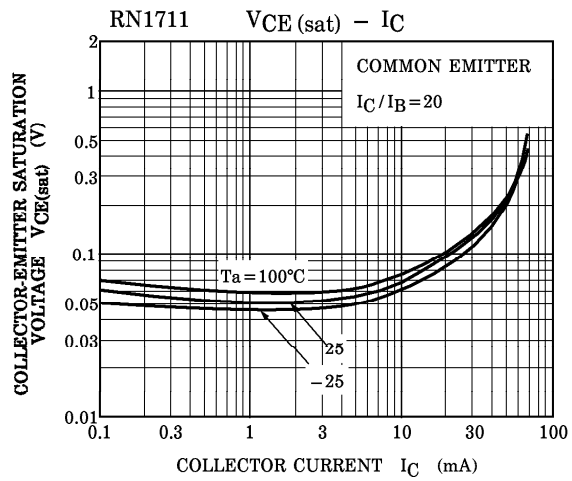
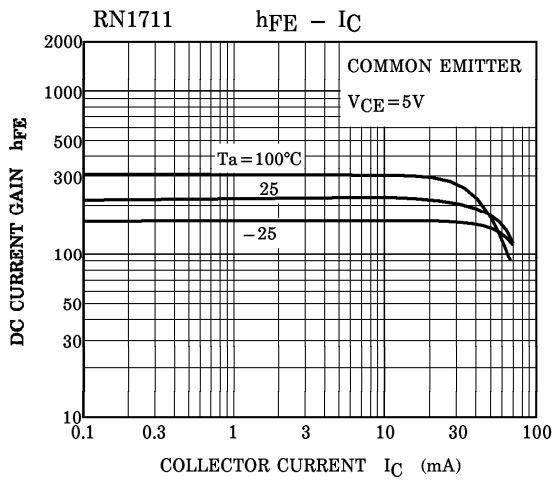
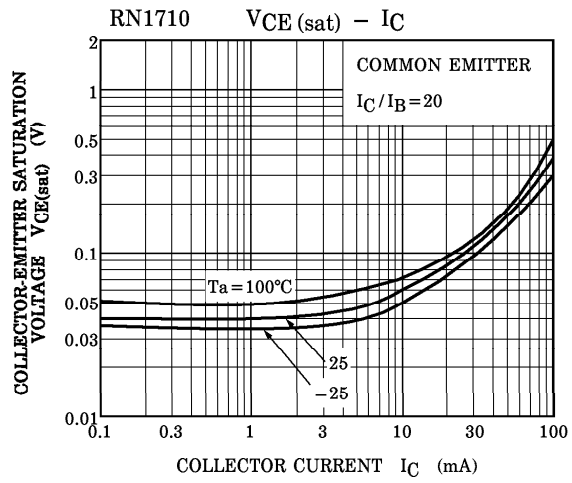
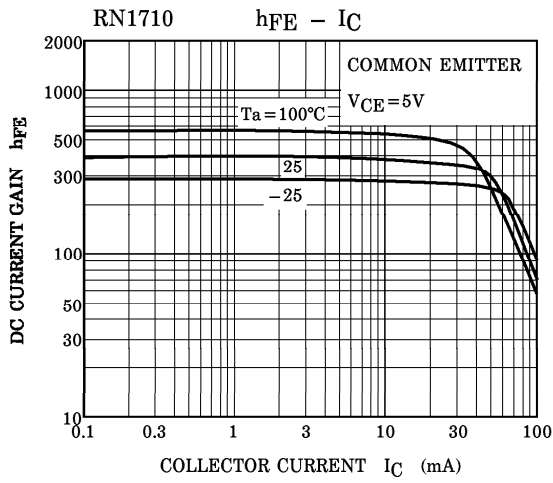
(Q1, Q2 COMMON)

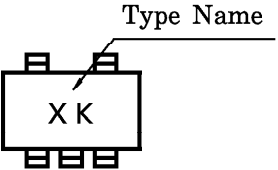


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(Q1, Q2 COMMON)



TYPE NAME	MARKING
RN1710	
RN1711	