

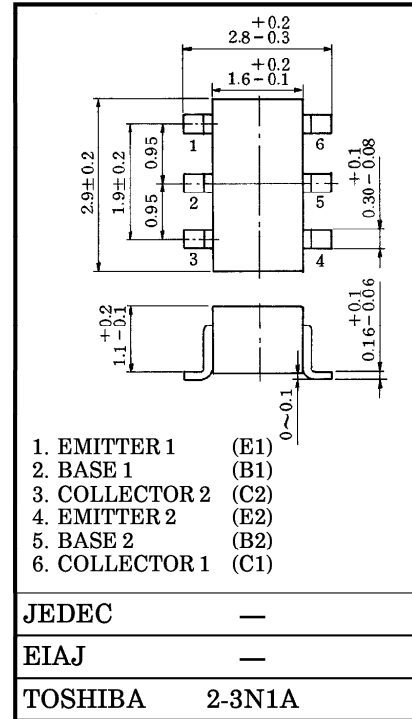
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

**RN2601, RN2602, RN2603, RN2604, RN2605, RN2606**

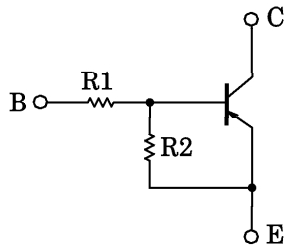
SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATIONS.

Unit in mm

- 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
- Complementary to RN1601~RN1606



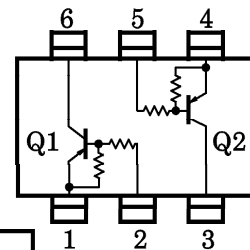
EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE NO.	R1 (kΩ)	R2 (kΩ)
RN2601	4.7	4.7
RN2602	10	10
RN2603	22	22
RN2604	47	47
RN2605	2.2	47
RN2606	4.7	47

Weight : 0.015g

EQUIVALENT CIRCUIT (TOP VIEW)



MAXIMUM RATINGS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN2601~2606	$V_{CB0}$	-50	V
Collector-Emitter Voltage		$V_{CEO}$	-50	V
Emitter-Base Voltage	RN2601~2604	$V_{EBO}$	-10	V
	RN2605, 2606		-5	
Collector Current	RN2601~2606	$I_C$	-100	mA
Collector Power Dissipation		$P_C^*$	300	mW
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55~150	°C

\* Total Rating

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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.

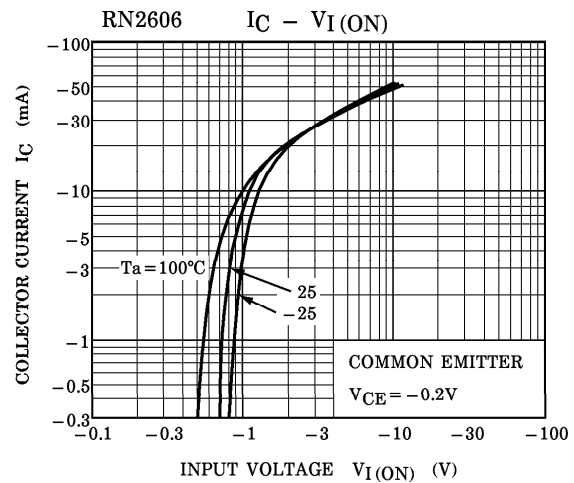
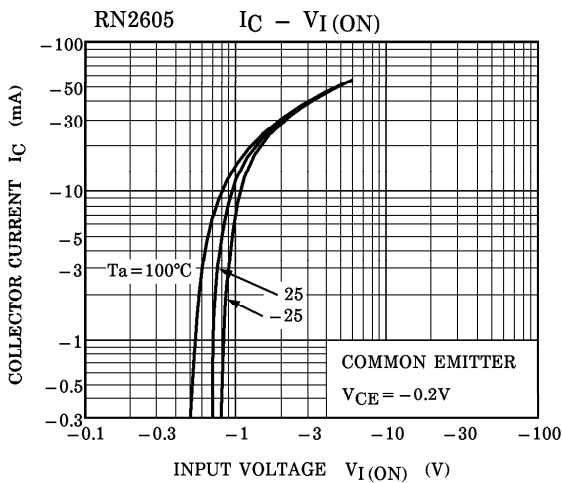
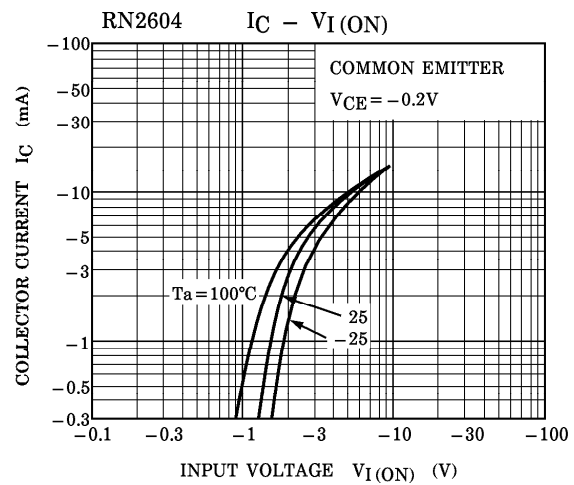
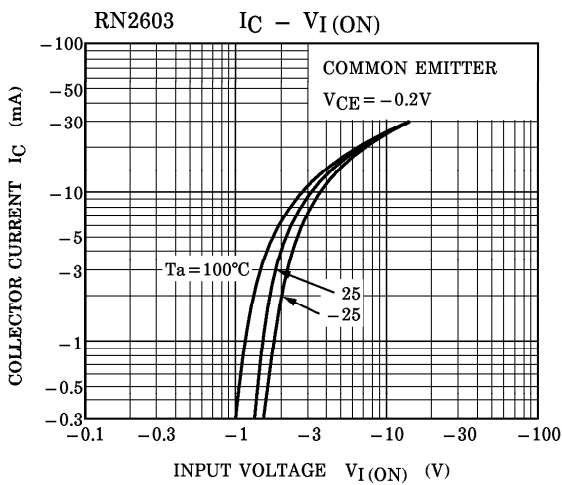
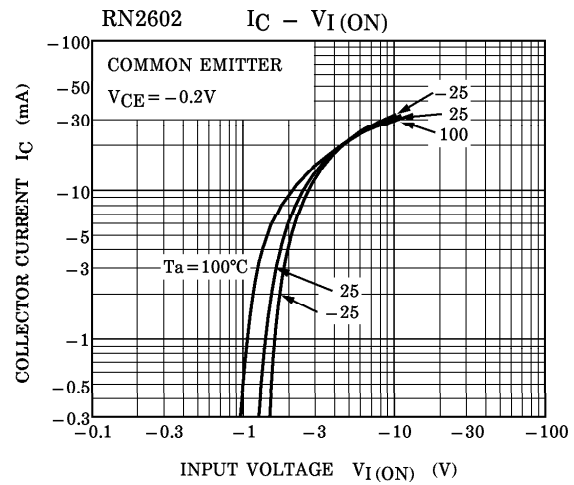
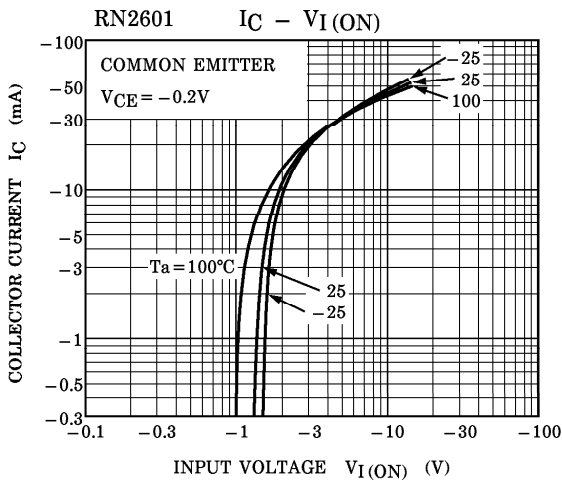
ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2601~2606	ICBO	V <sub>CB</sub> = -50V, I <sub>E</sub> = 0	—	—	-100	nA
		ICEO	V <sub>CE</sub> = -50V, I <sub>B</sub> = 0	—	—	-500	
Emitter Cut-off Current	RN2601	I <sub>EBO</sub>	V <sub>EB</sub> = -10V, I <sub>C</sub> = 0	-0.82	—	-1.52	mA
	RN2602			-0.38	—	-0.71	
	RN2603			-0.17	—	-0.33	
	RN2604		-0.082	—	-0.15		
	RN2605		V <sub>EB</sub> = -5V, I <sub>C</sub> = 0	-0.078	—	-0.145	
	RN2606			-0.074	—	-0.138	
DC Current Gain	RN2601	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA	30	—	—	
	RN2602			50	—	—	
	RN2603			70	—	—	
	RN2604			80	—	—	
	RN2605			80	—	—	
	RN2606			80	—	—	
Collector-Emitter Saturation Voltage	RN2601~2606	V <sub>CE(sat)</sub>	I <sub>C</sub> = -5mA, I <sub>B</sub> = -0.25mA	—	-0.1	-0.3	V
Input Voltage (ON)	RN2601	V <sub>I(ON)</sub>	V <sub>CE</sub> = -0.2V, I <sub>C</sub> = -5mA	-1.1	—	-2.0	V
	RN2602			-1.2	—	-2.4	
	RN2603			-1.3	—	-3.0	
	RN2604			-1.5	—	-5.0	
	RN2605			-0.6	—	-1.1	
	RN2606			-0.7	—	-1.3	
Input Voltage (OFF)	RN2601~2604	V <sub>I(OFF)</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -0.1mA	-1.0	—	-1.5	V
	RN2605, 2606			-0.5	—	-0.8	
Transition Frequency	RN2601~2606	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -5mA	—	200	—	MHz
Collector Output Capacitance	RN2601~2606	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0 f = 1MHz	—	3	6	pF
Input Resistor	RN2601	R <sub>1</sub>	—	3.29	4.7	6.11	kΩ
	RN2602			7	10	13	
	RN2603			15.4	22	28.6	
	RN2604			32.9	47	61.1	
	RN2605			1.54	2.2	2.86	
	RN2606			3.29	4.7	6.11	
Resistor Ratio	RN2601~2604	R <sub>1</sub> / R <sub>2</sub>	—	0.9	1.0	1.1	
	RN2605			0.0421	0.0468	0.0515	
	RN2606			0.09	0.1	0.11	

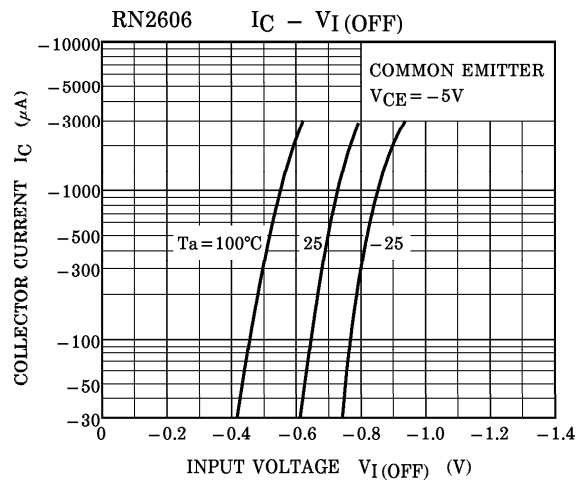
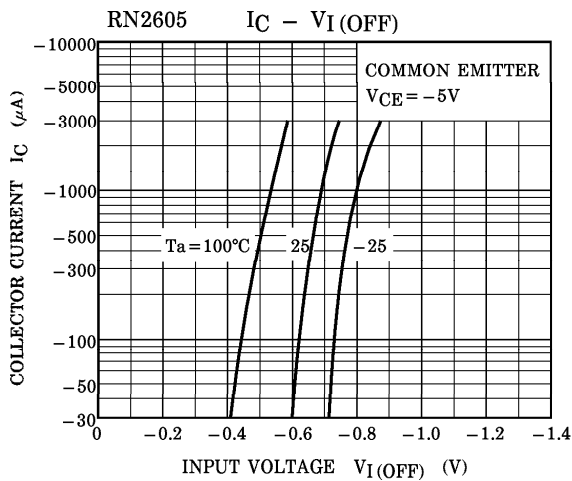
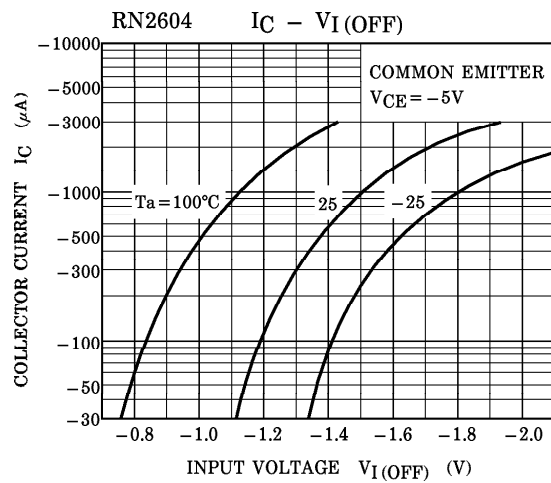
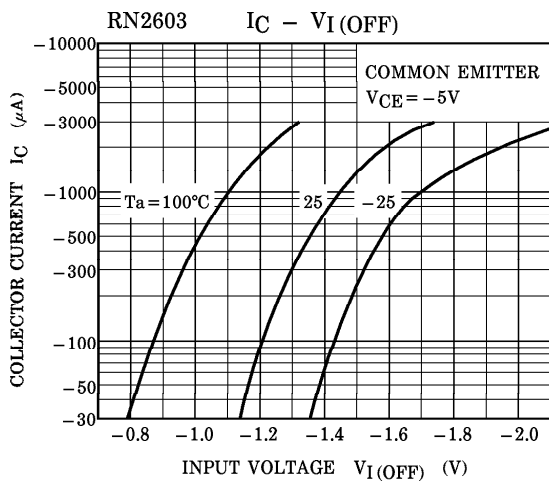
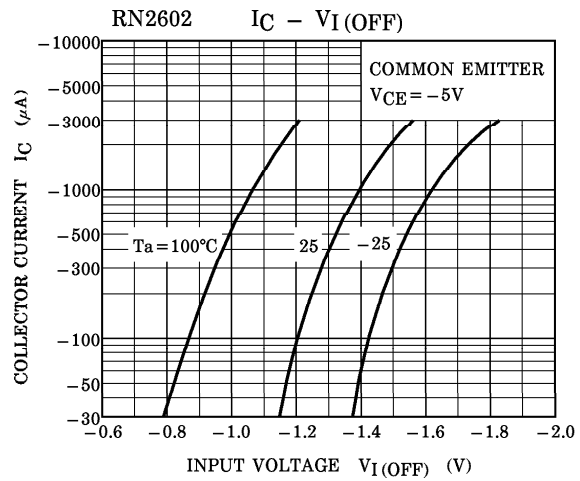
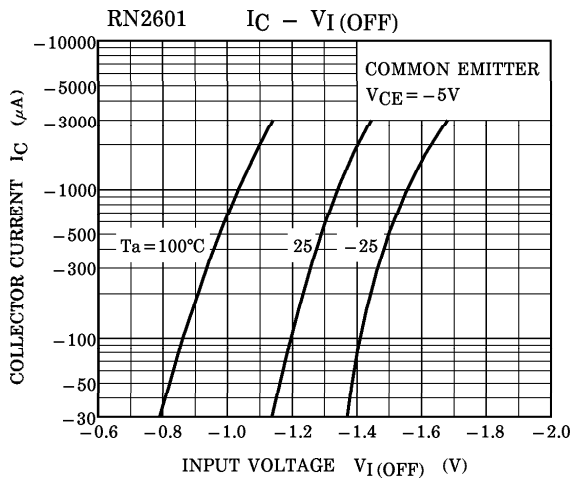
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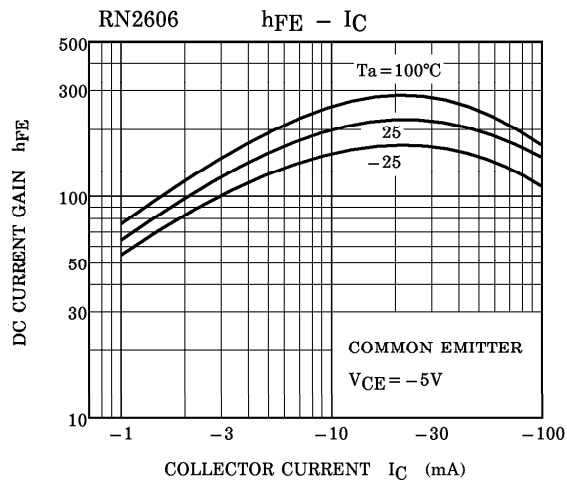
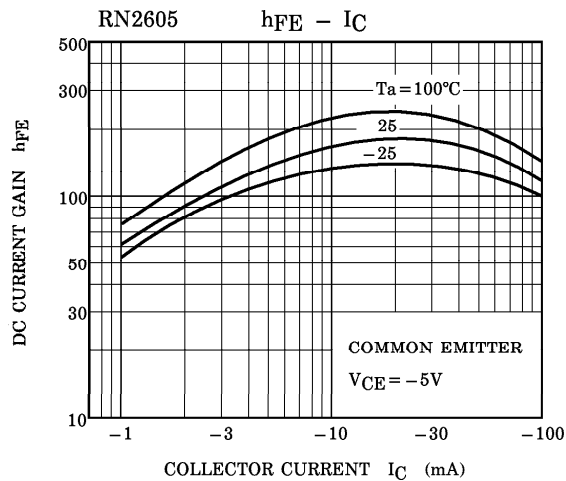
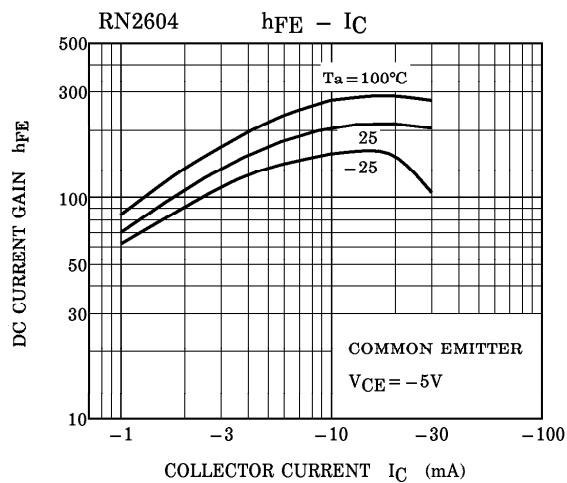
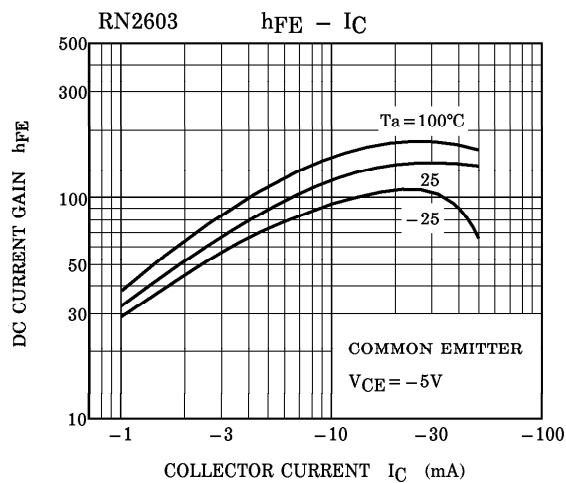
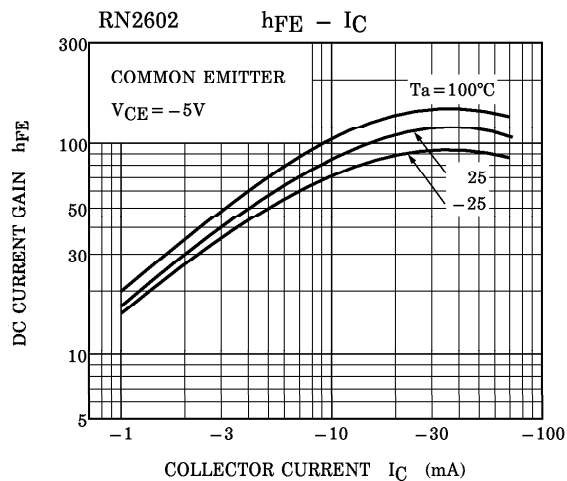
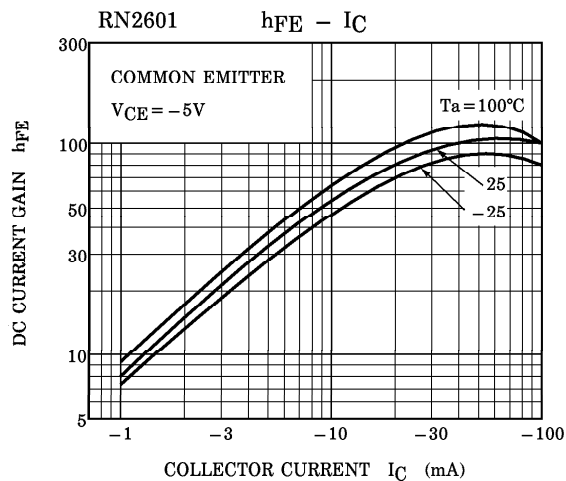
(Q1, Q2 COMMON)

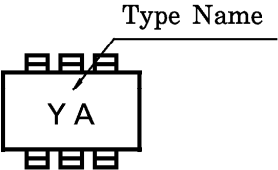
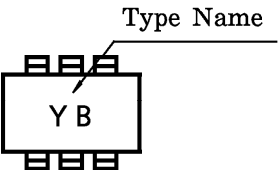
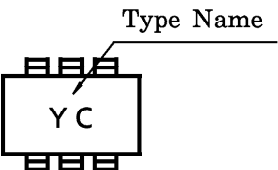
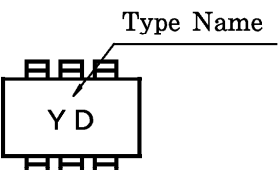
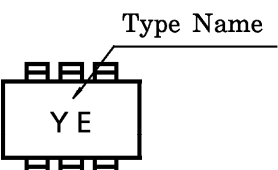


(Q1, Q2 COMMON)



(Q1, Q2 COMMON)



TYPE NAME	MARKING
RN2601	
RN2602	
RN2603	
RN2604	
RN2605	
RN2606	