

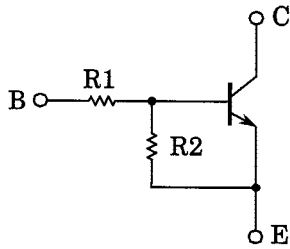
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

## RN2601, RN2602, RN2603 RN2604, RN2605, RN2606

Switching, Inverter Circuit, Interface Circuit  
And Driver Circuit Applications

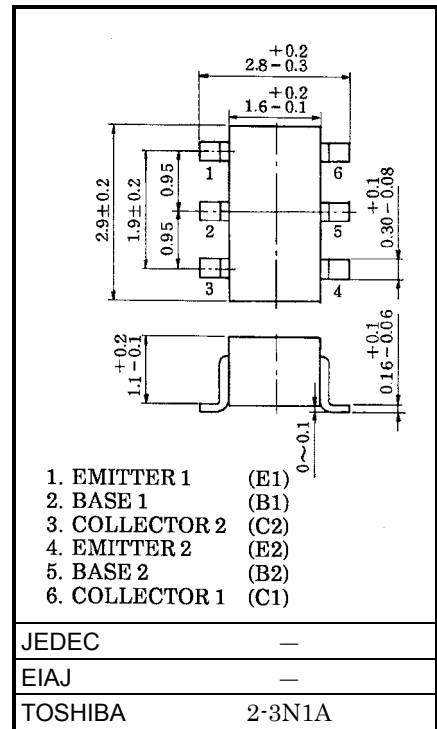
- Including two devices in SM6 (super mini type with 6 leads)
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1601~1606

### 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

Unit in mm

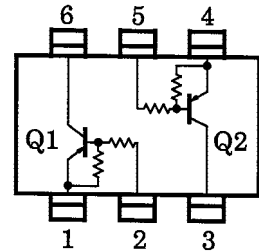


### Equivalent Circuit (Top View)

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

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-50	V
Collector-emitter voltage	$V_{CEO}$	-50	V
Emitter-base voltage	$V_{EBO}$	-10	V
		-5	
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C^*$	300	mW
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55~150	°C

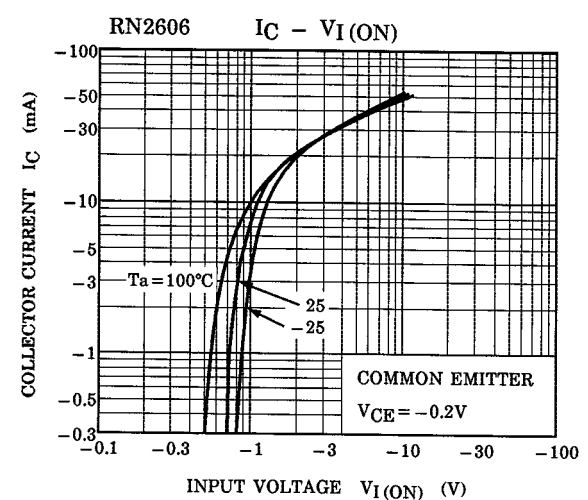
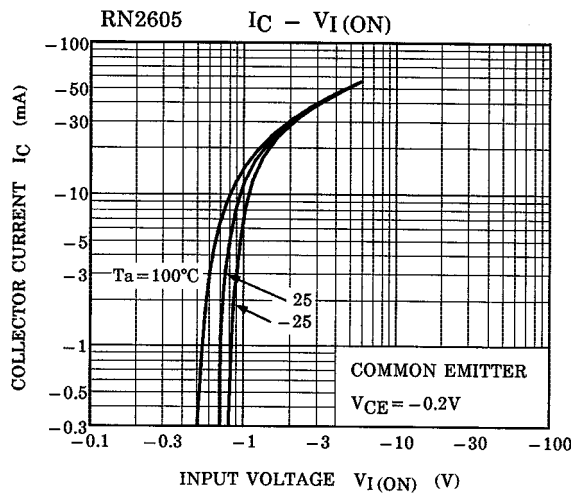
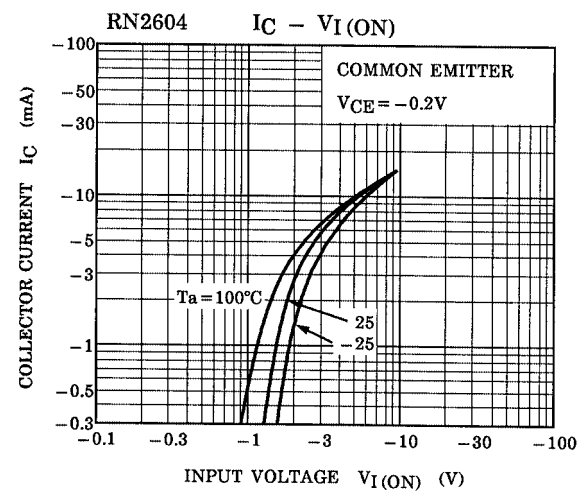
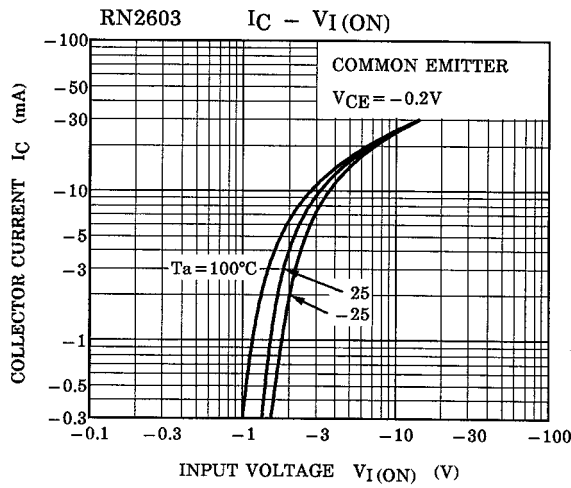
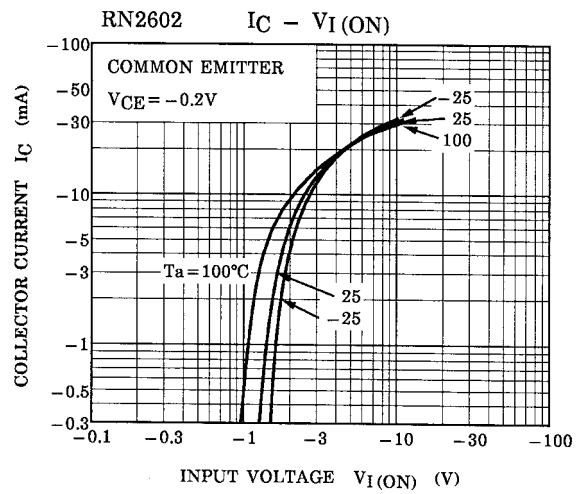
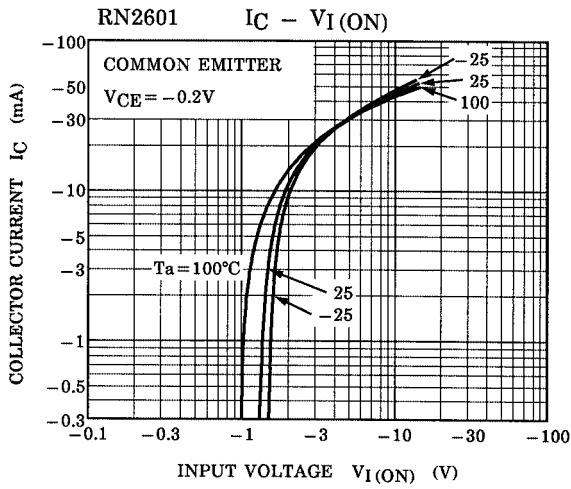
\* Total rating



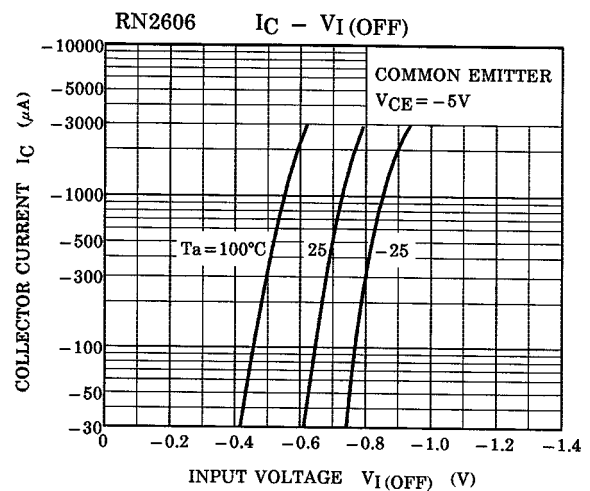
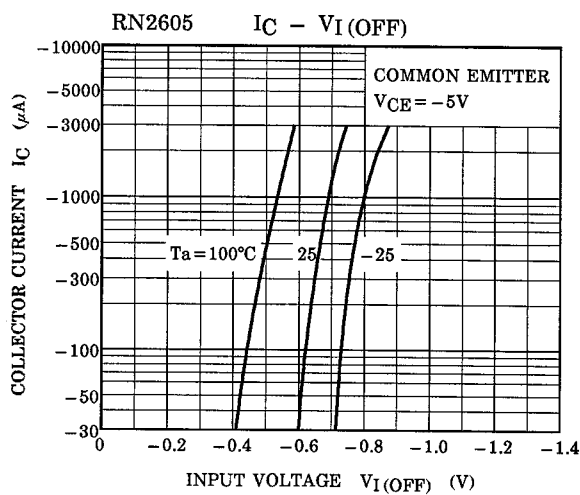
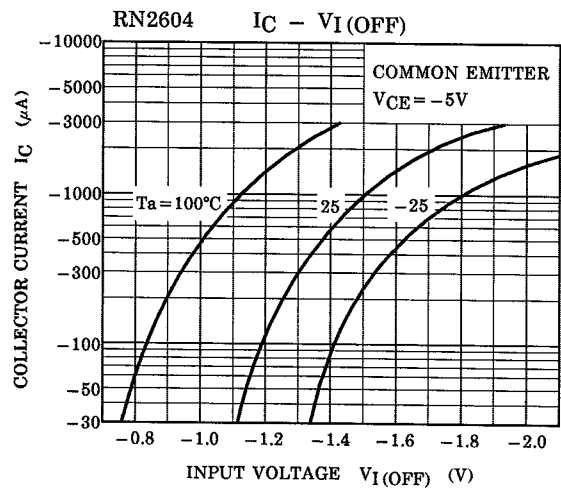
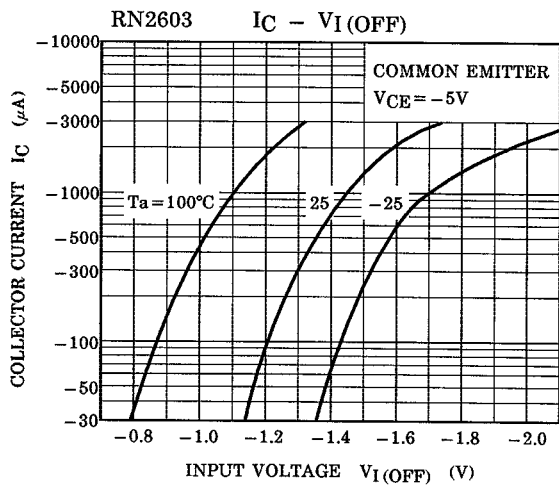
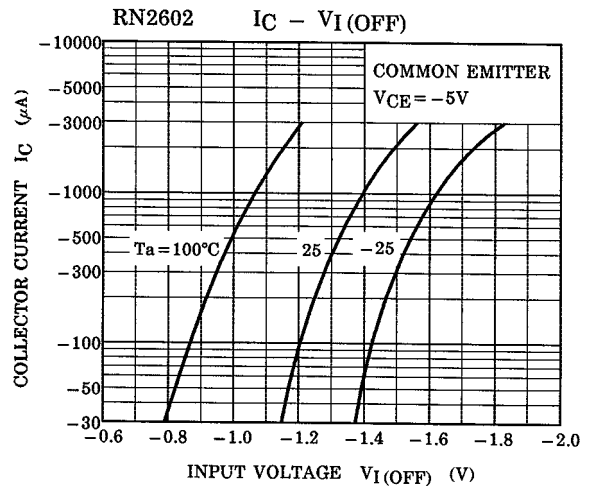
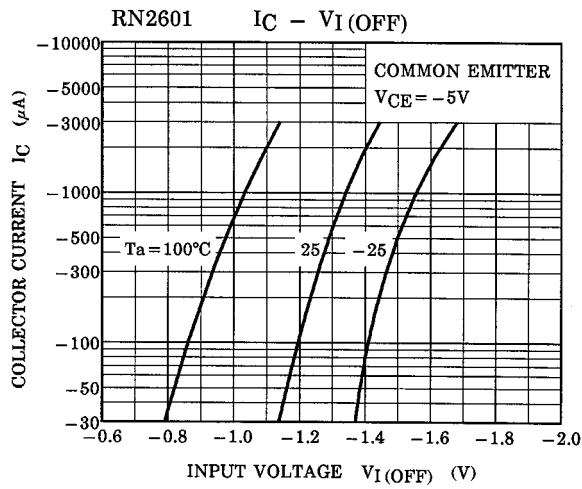
## Electrical Characteristics (Ta = 25°C) (Q1, Q2 common)

Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	RN2601~2606	$I_{CBO}$	—	$V_{CB} = -50V, I_E = 0$	—	—	-100	nA
		$I_{CEO}$	—	$V_{CE} = -50V, I_B = 0$	—	—	-500	
Emitter cut-off current	RN2601	$I_{EBO}$	—	$V_{EB} = -10V, I_C = 0$	-0.82	—	-1.52	mA
	RN2602		—		-0.38	—	-0.71	
	RN2603		—		-0.17	—	-0.33	
	RN2604		—	-0.082	—	-0.15		
	RN2605		—	$V_{EB} = -5V, I_C = 0$	-0.078	—	-0.145	
	RN2606		—		-0.074	—	-0.138	
DC current gain	RN2601	$h_{FE}$	—	$V_{CE} = -5V$ $I_C = -10mA$	30	—	—	—
	RN2602		—		50	—	—	
	RN2603		—		70	—	—	
	RN2604		—		80	—	—	
	RN2605		—		80	—	—	
	RN2606		—		80	—	—	
Collector-emitter saturation voltage	RN2601~2606	$V_{CE(sat)}$	—	$I_C = -5mA$ $I_B = -0.25mA$	—	-0.1	-0.3	V
Input voltage (ON)	RN2601	$V_{I(ON)}$	—	$V_{CE} = -0.2V$ $I_C = -5mA$	-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	$V_{I(OFF)}$	—	$V_{CE} = -5V,$ $I_C = -0.1mA$	-1.0	—	-1.5	V
	RN2605, 2606		—		-0.5	—	-0.8	
Translation frequency	RN2601~2606	$f_T$	—	$V_{CE} = -10V,$ $I_C = -5mA$	—	200	—	MHz
Collector output capacitance	RN2601~2606	$C_{ob}$	—	$V_{CB} = -10V, I_E = 0$ $f = 1MHz$	—	3	6	pF
Input resistor	RN2601	R1	—	—	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	R1/R2	—	—	0.9	1.0	1.1	—
	RN2605		—		0.0421	0.0468	0.0515	
	RN2606		—		0.09	0.1	0.11	

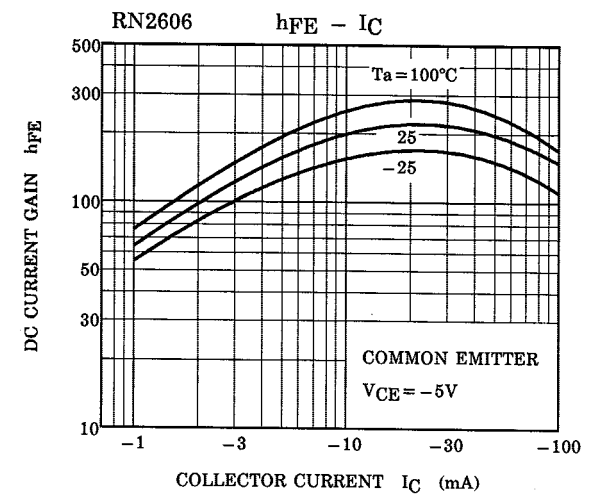
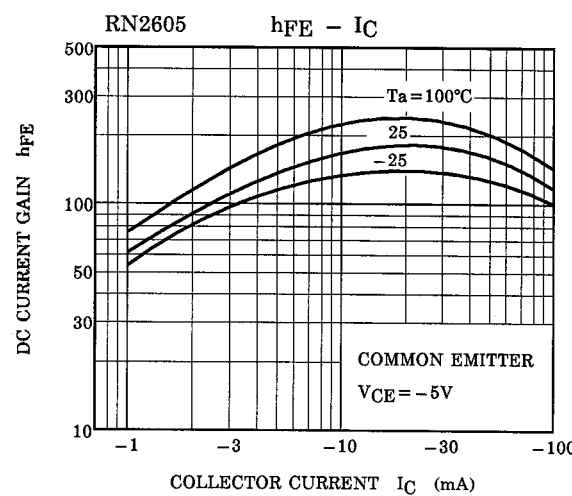
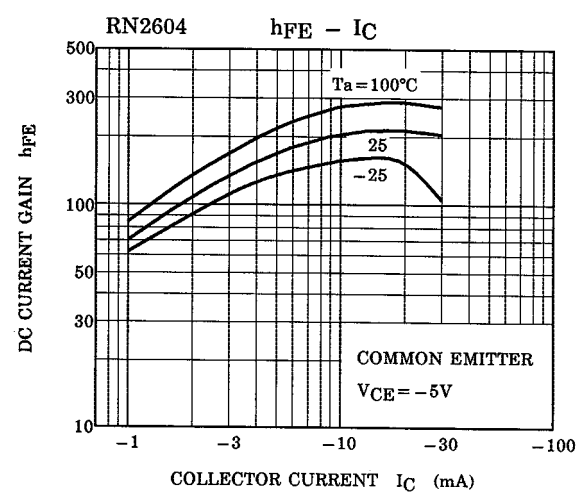
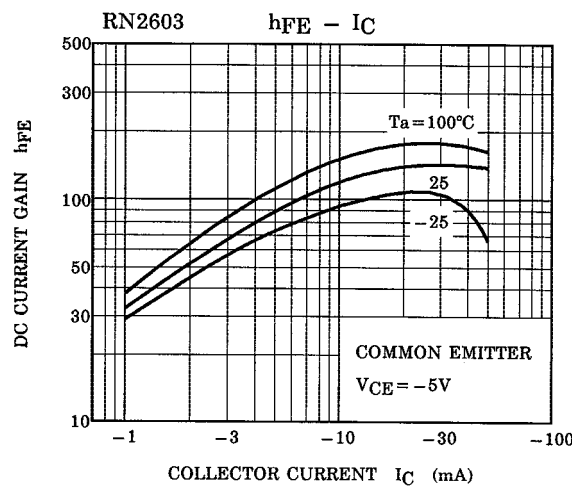
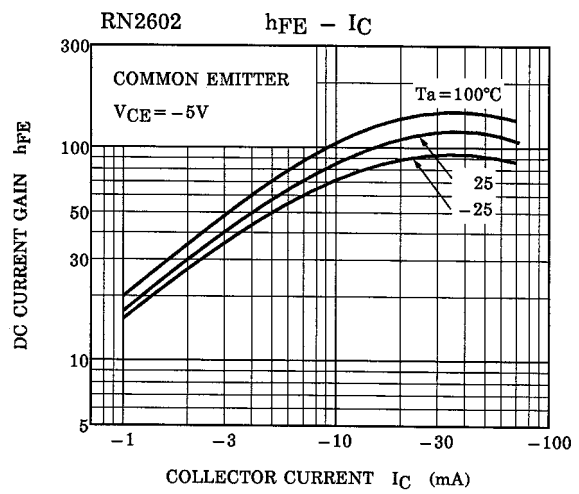
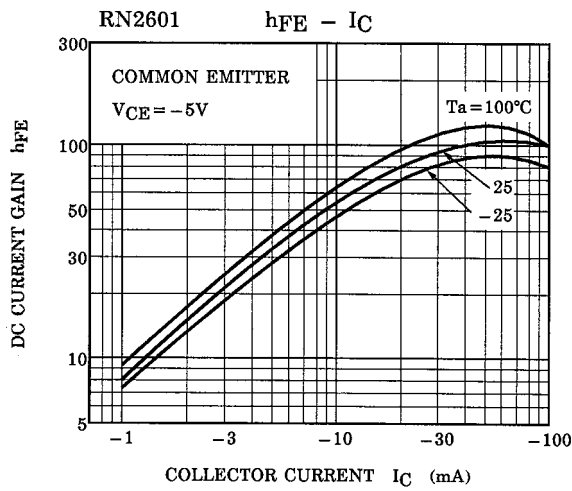
(Q1, Q2 Common)

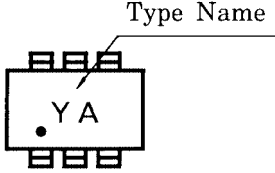
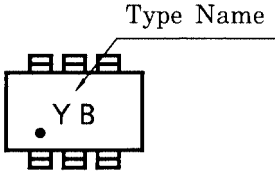
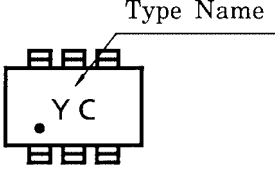
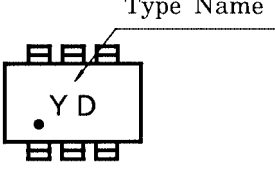
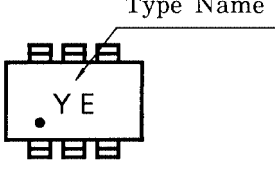
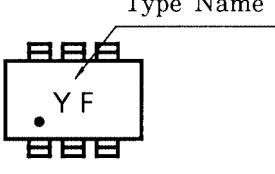


(Q1, Q2 Common)



(Q1, Q2 Common)



Type Name	Marking
RN2601	
RN2602	
RN2603	
RN2604	
RN2605	
RN2606	

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