

TOSHIBA TRANSISTOR SILOCON PNP EPITAXIAL TYPE (PCT PROCESS)

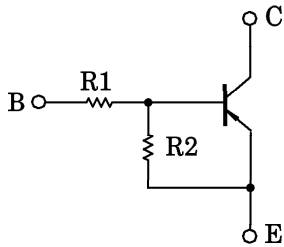
RN2407, RN2408, RN2409

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT AND DRIVER
CIRCUIT APPLICATIONS

Unit in mm

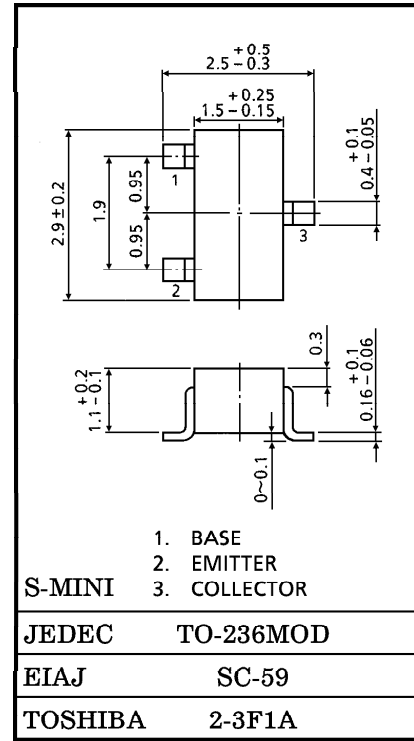
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1407~1409

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2407	10	47
RN2408	22	47
RN2409	47	22



Weight : 0.012g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	-50	V
Collector-Emitter Voltage			
Emitter-Base Voltage	V _{EB0}	-6	V
		-7	
		-15	
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

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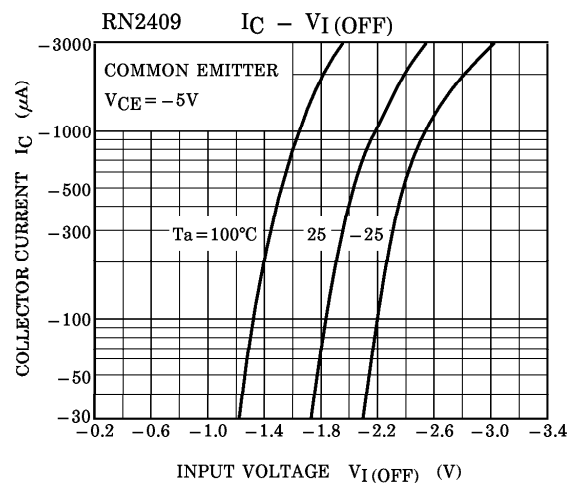
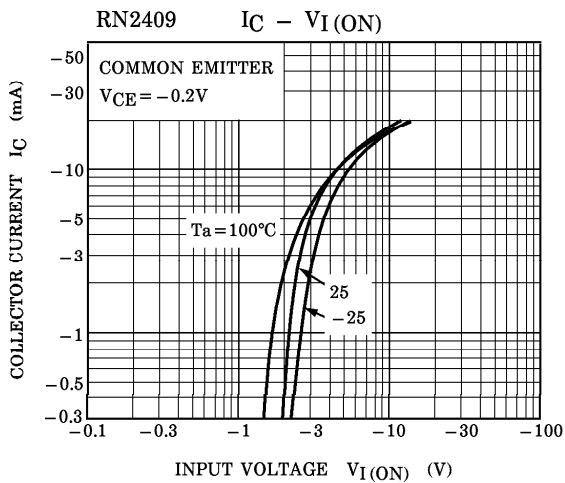
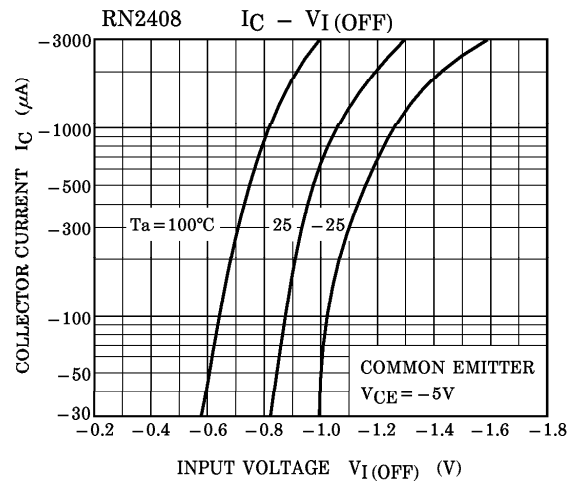
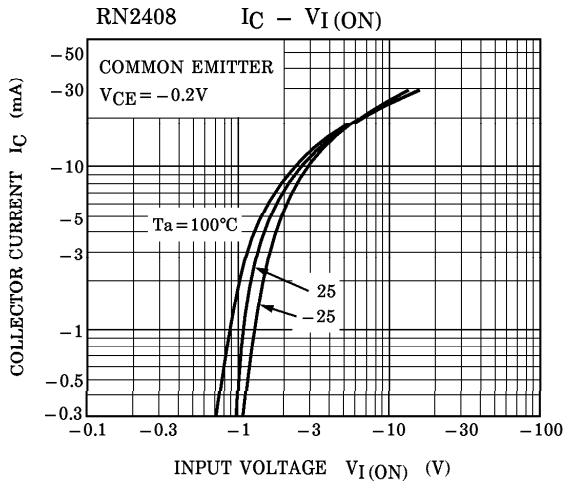
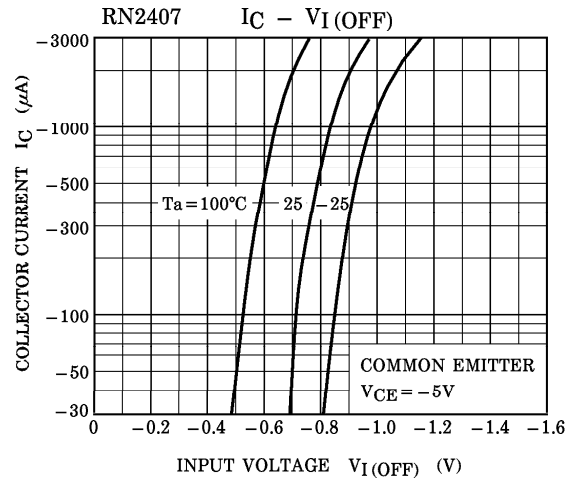
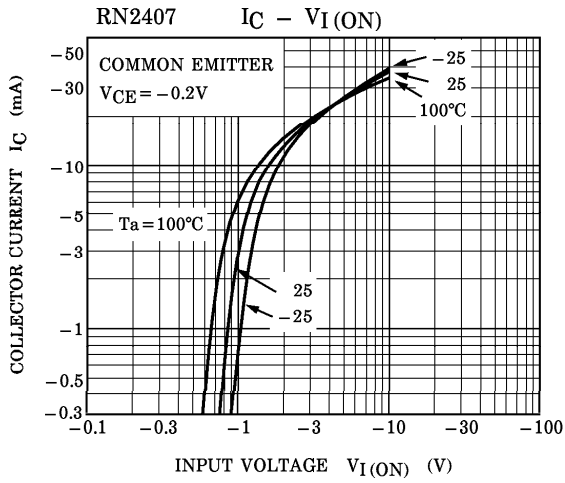
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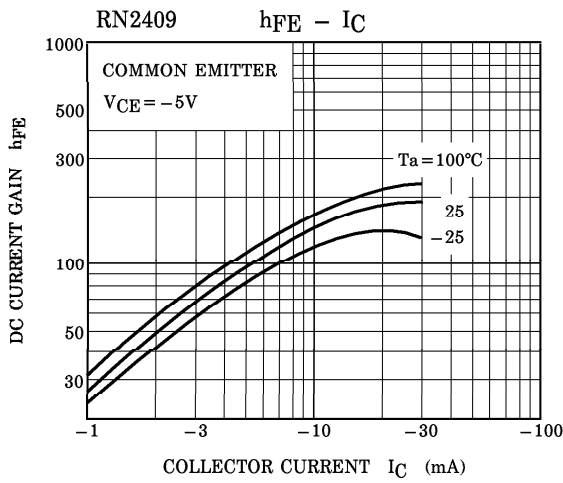
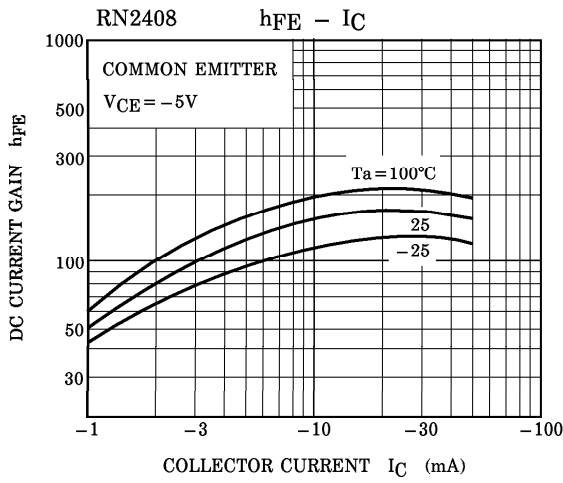
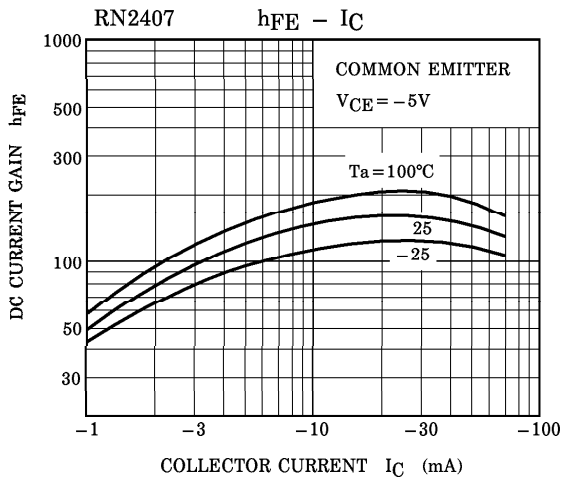
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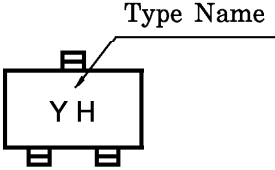
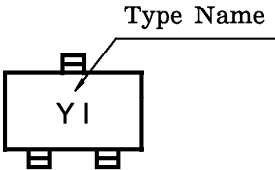
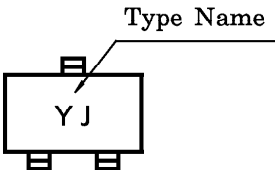
● The information contained herein is subject to change without notice.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTICS		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2407~2409	I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	μA
		I_{CEO}	$V_{CE} = -50V, I_B = 0$	—	—	-0.5	
Emitter Cut-off Current	RN2407	I_{EBO}	$V_{EB} = -6V, I_C = 0$	-0.081	—	-0.15	mA
	RN2408		$V_{EB} = -7V, I_C = 0$	-0.078	—	-0.145	
	RN2409		$V_{EB} = -15V, I_C = 0$	-0.167	—	-0.311	
DC Current Gain	RN2407	h_{FE}	$V_{CE} = -5V,$ $I_C = -10mA$	80	—	—	—
	RN2408			80	—	—	
	RN2409			70	—	—	
Collector-Emitter Saturation Voltage	RN2407~2409	$V_{CE(sat)}$	$I_C = -5mA,$ $I_B = -0.25mA$	—	-0.1	-0.3	V
Input Voltage (ON)	RN2407	$V_{I(ON)}$	$V_{CE} = -0.2V,$ $I_C = -5mA$	-0.7	—	-1.8	V
	RN2408			-1.0	—	-2.6	
	RN2409			-2.2	—	-5.8	
Input Voltage (OFF)	RN2407	$V_{I(OFF)}$	$V_{CE} = -5V,$ $I_C = -0.1mA$	-0.5	—	-1.0	V
	RN2408			-0.6	—	-1.16	
	RN2409			-1.5	—	-2.6	
Transition Frequency	RN2407~2409	f_T	$V_{CE} = -10V,$ $I_C = -5mA$	—	200	—	MHz
Collector Output Capacitance	RN2407~2409	C_{ob}	$V_{CB} = -10V, I_E = 0,$ $f = 1MHz$	—	3	6	pF
Input Resistor	RN2407	R1	—	7	10	13	k Ω
	RN2408			15.4	22	28.6	
	RN2409			32.9	47	61.1	
Resistor Ratio	RN2407	R1 / R2	—	0.191	0.213	0.232	—
	RN2408			0.421	0.468	0.515	
	RN2409			1.92	2.14	2.35	





TYPE No.	MARKING
RN2407	 A rectangular box containing the characters 'Y H'. A pointer line originates from the text 'Type Name' above the box and points to a small square symbol located at the top center of the box. Two smaller square symbols are positioned at the bottom left and bottom right corners of the box.
RN2408	 A rectangular box containing the characters 'Y I'. A pointer line originates from the text 'Type Name' above the box and points to a small square symbol located at the top center of the box. Two smaller square symbols are positioned at the bottom left and bottom right corners of the box.
RN2409	 A rectangular box containing the characters 'Y J'. A pointer line originates from the text 'Type Name' above the box and points to a small square symbol located at the top center of the box. Two smaller square symbols are positioned at the bottom left and bottom right corners of the box.