

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

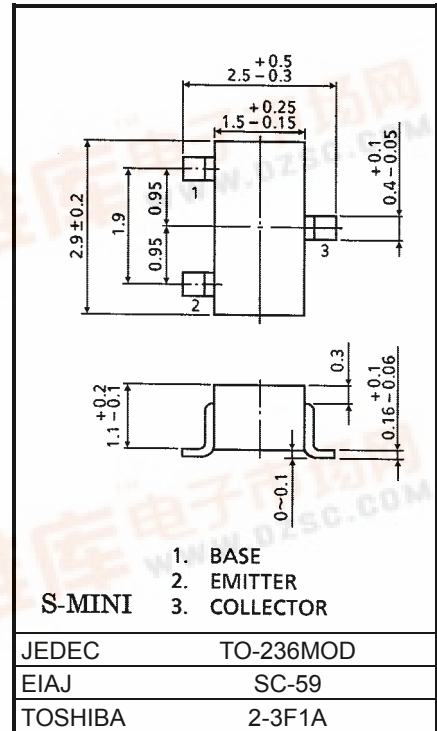
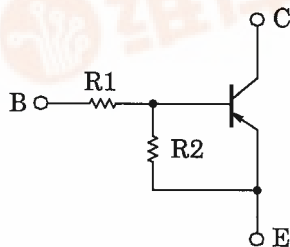
# RN2407, RN2408, RN2409

Unit: mm

Switching, Inverter Circuit, Interface Circuit  
And Driver Circuit Applications

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1407~1409

### Equivalent Circuit



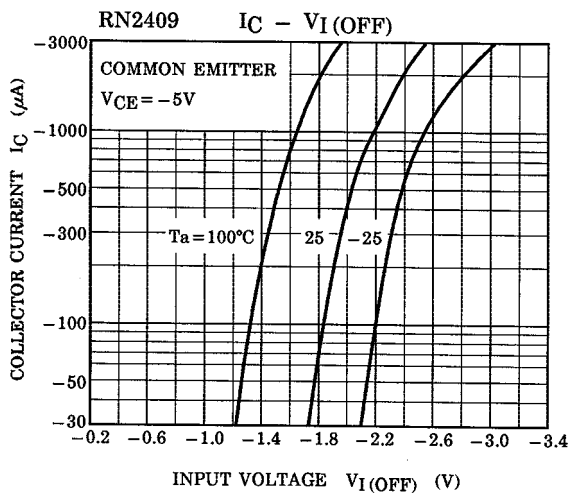
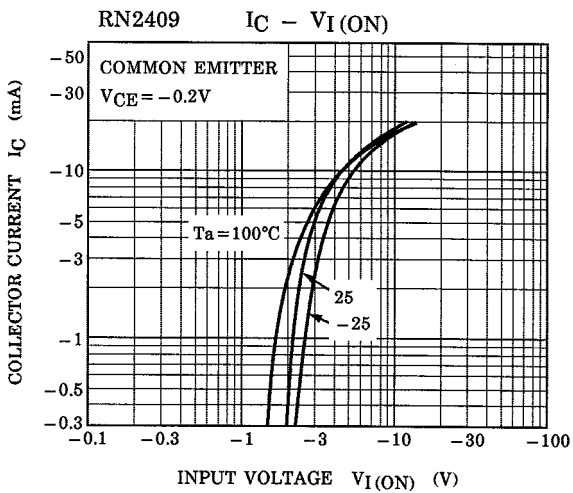
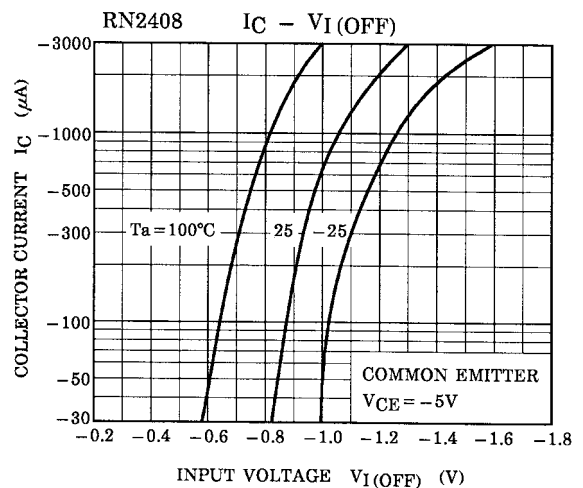
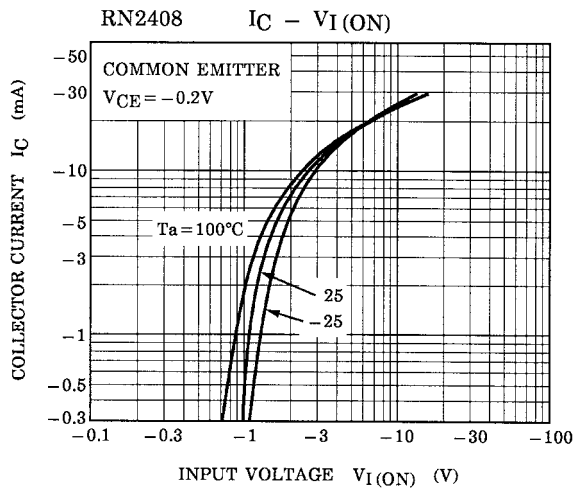
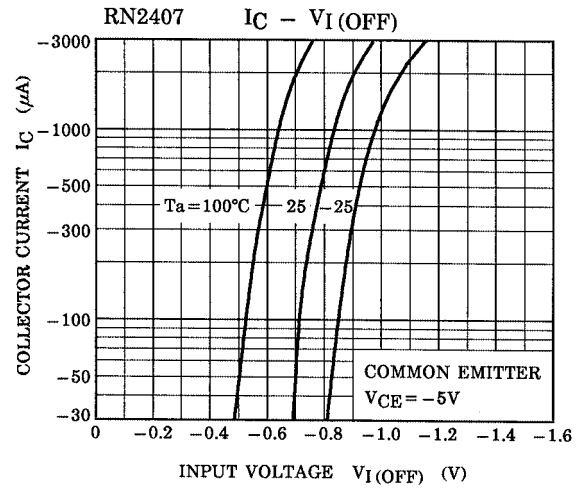
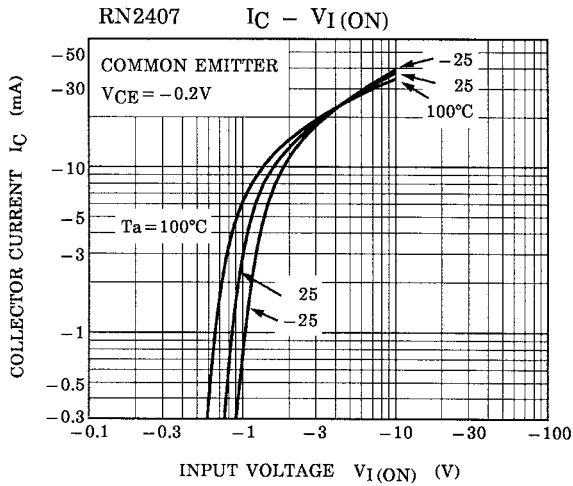
Weight: 0.012g

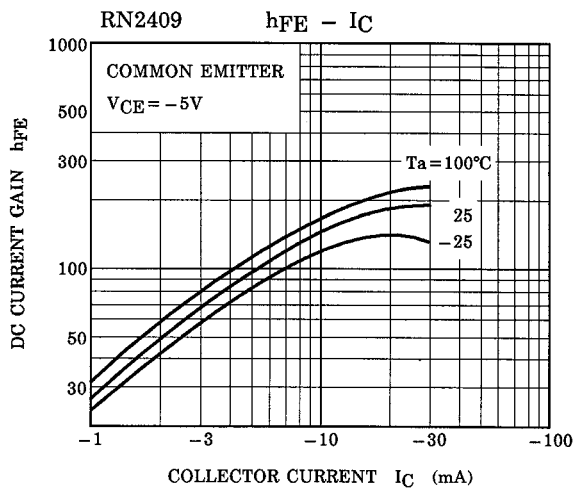
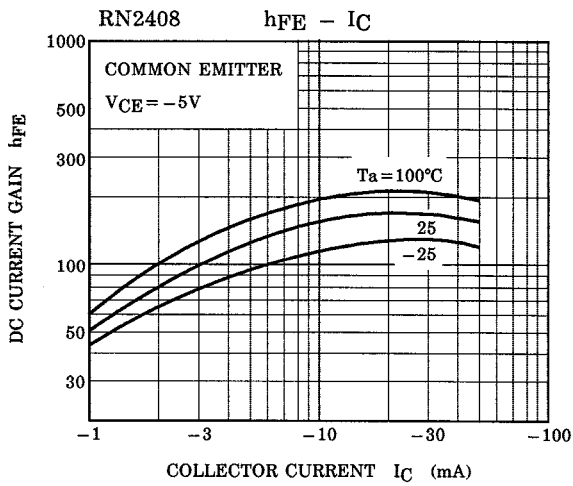
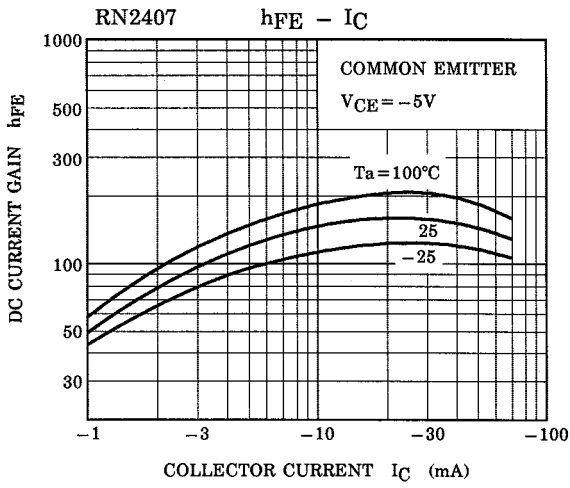
### Maximum Ratings (Ta = 25°C)

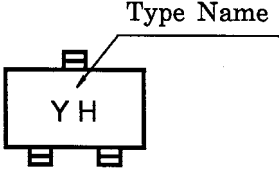
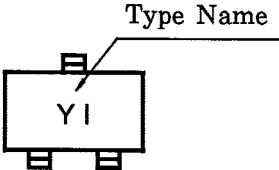
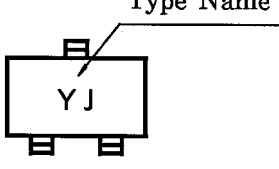
Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-50	V
Collector-emitter voltage	$V_{CEO}$	-50	V
Emitter-base voltage	$V_{EBO}$	-6	V
		-7	
		-15	
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-5~150	°C

## Electrical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	RN2407~RN2409	$I_{CBO}$	—	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	nA
		$I_{CEO}$	—	$V_{CE} = -50V, I_B = 0$	—	—	-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~RN2409	$V_{CE(sat)}$	—	$I_C = -5mA, I_B = -0.25mA$	—	-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	
Translation frequency	RN2407~RN2409	$f_T$	—	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector output capacitance	RN2407~RN2409	$C_{ob}$	—	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3	6	pF
Input resistor	RN2407	R1	—	—	7	10	13	kΩ
	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 Name	Marking
RN2407	
RN2408	
RN2409	

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000707EAA

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