

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

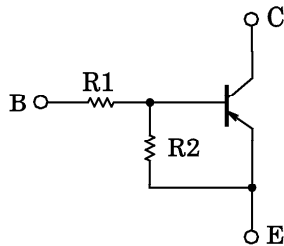
RN2107, RN2108, RN2109

Unit in mm

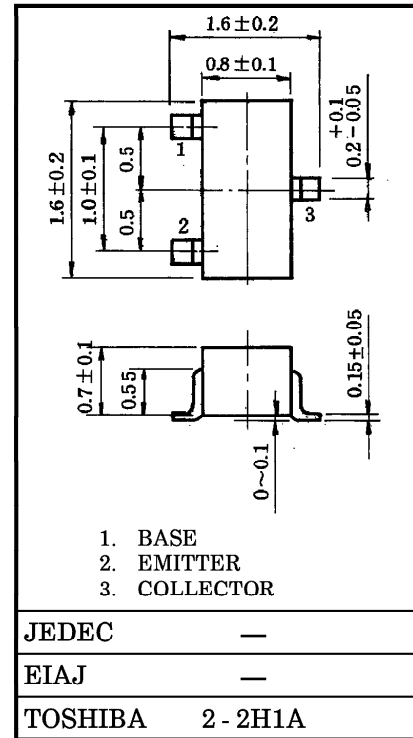
SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS.

- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1107~RN1109

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2107	10	47
RN2108	22	47
RN2109	47	22



Weight : 2.4mg

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN2107~2109	V _{CB0}	-50	V
Collector-Emitter Voltage		V _{CEO}	-50	V
Emitter-Base Voltage	RN2107	V _{EBO}	-6	V
	RN2108		-7	
	RN2109		-15	
Collector Current	RN2107~2109	I _C	-100	mA
Collector Power Dissipation		P _{C*}	100	mW
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _{stg}	-55~150	°C

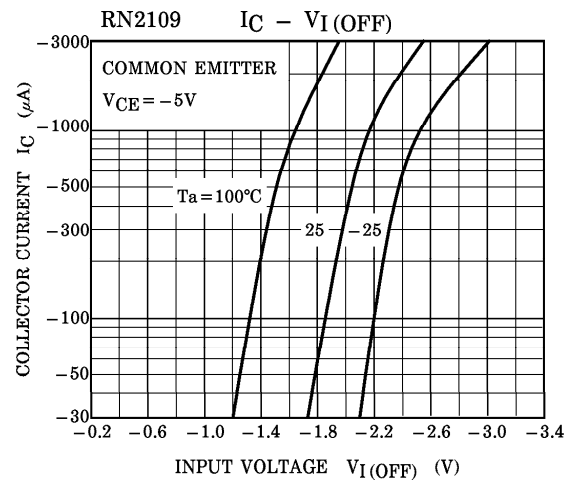
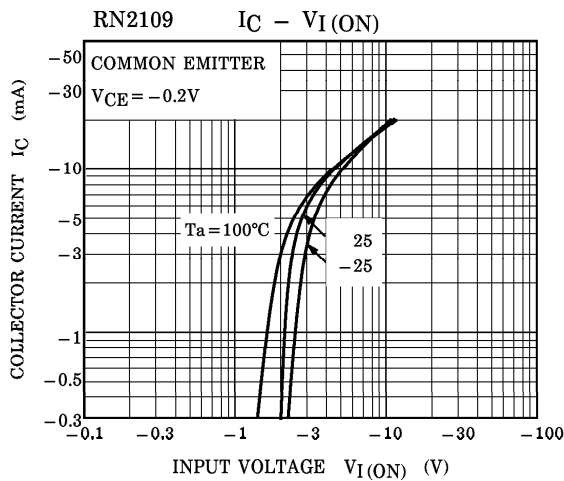
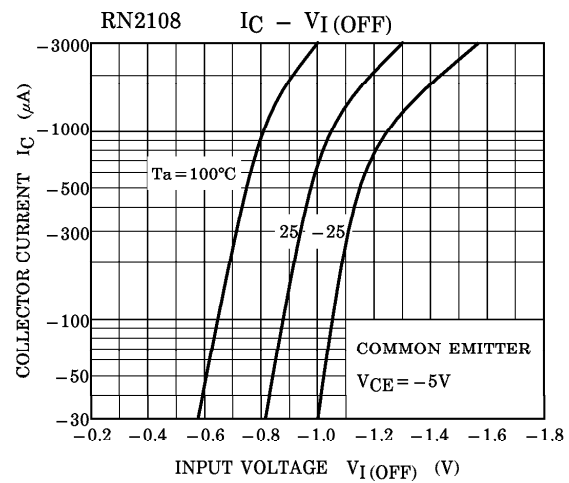
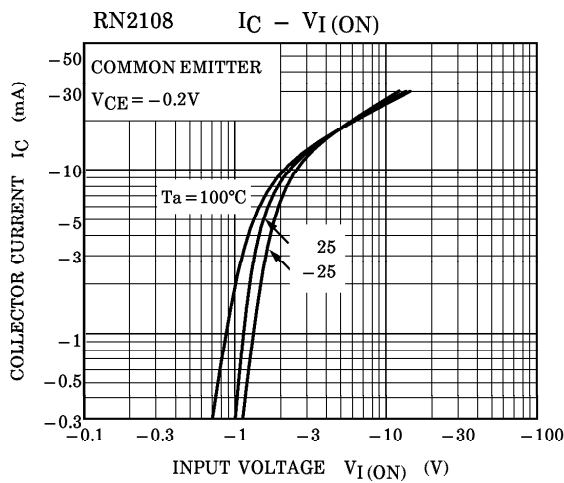
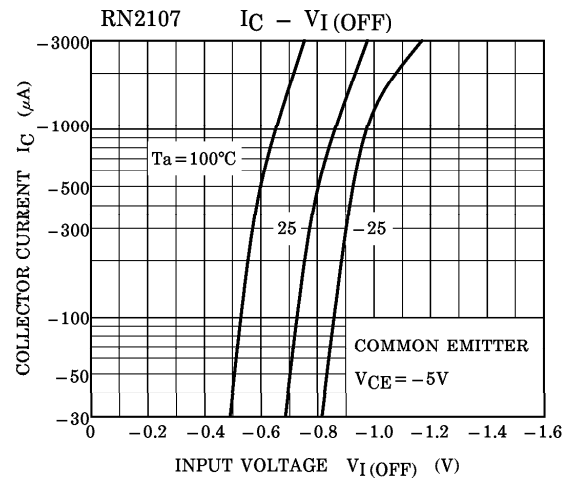
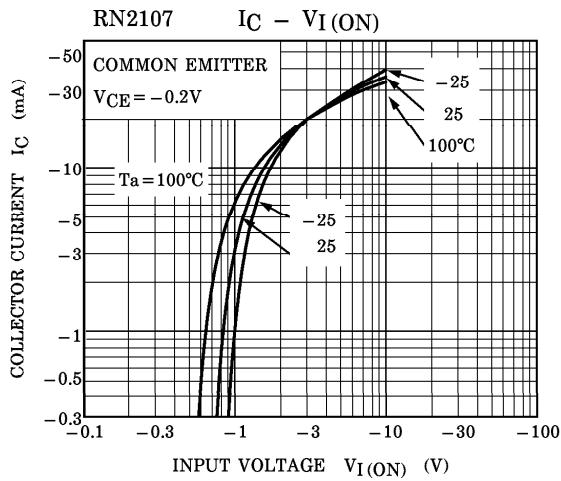
* : Total Rating

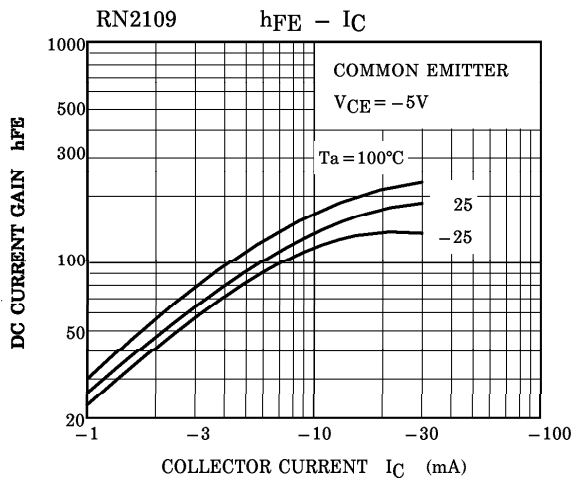
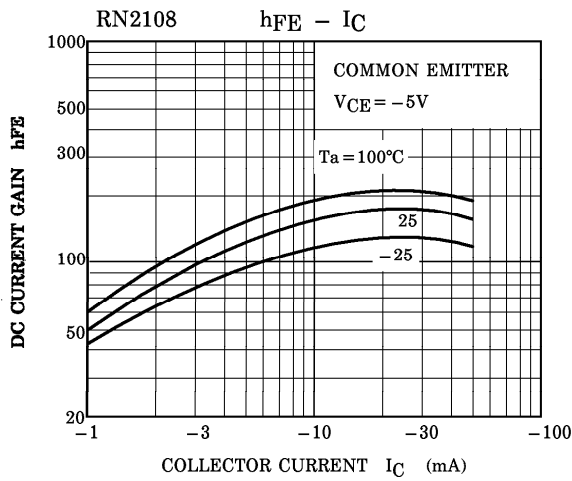
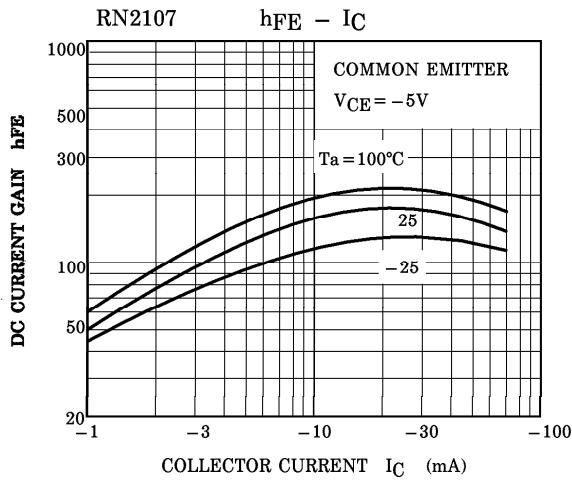
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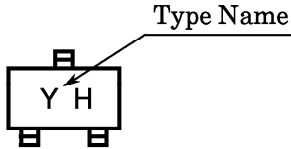
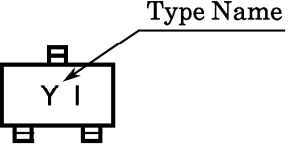
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ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2107~2109	I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-100	nA
		I_{CEO}	$V_{CE} = -50V, I_B = 0$	—	—	-500	nA
Emitter Cut-off Current	RN2107	I_{EBO}	$V_{EB} = -6V, I_C = 0$	-0.081	—	-0.15	mA
	RN2108			-0.078	—	-0.145	
	RN2109			-0.167	—	-0.311	
DC Current Gain	RN2107	h_{FE}	$V_{CE} = -5V, I_C = -10mA$	80	—	—	
	RN2108			80	—	—	
	RN2109			70	—	—	
Collector-Emitter Saturation Voltage	RN2107~2109	$V_{CE(sat)}$	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V
Input Voltage (ON)	RN2107	$V_{I(ON)}$	$V_{CE} = -0.2V, I_C = -5mA$	-0.7	—	-1.8	V
	RN2108			-1.0	—	-2.6	
	RN2109			-2.2	—	-5.8	
Input Voltage (OFF)	RN2107	$V_{I(OFF)}$	$V_{CE} = -5V, I_C = -0.1mA$	-0.5	—	-1.0	V
	RN2108			-0.6	—	-1.16	
	RN2109			-1.5	—	-2.6	
Transition Frequency	RN2107~2109	f_T	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector Output Capacitance	RN2107~2109	C_{ob}	$V_{CB} = -10V, I_E = 0,$ $f = 1MHz$	—	3	6	pF
Input Resistor	RN2107	R1		7	10	13	k Ω
	RN2108			15.4	22	28.6	
	RN2109			32.9	47	61.1	
Resistor Ratio	RN2107	R1 / R2		0.191	0.213	0.232	
	RN2108			0.421	0.468	0.515	
	RN2109			1.92	2.14	2.35	





TYPE NAME	MARKING
RN2107	
RN2108	
RN2109	