

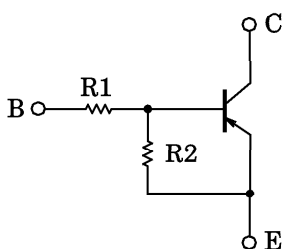
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

RN2307, RN2308, RN2309

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS

- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts Manufacturing Process
- Complementary to RN1307~1309

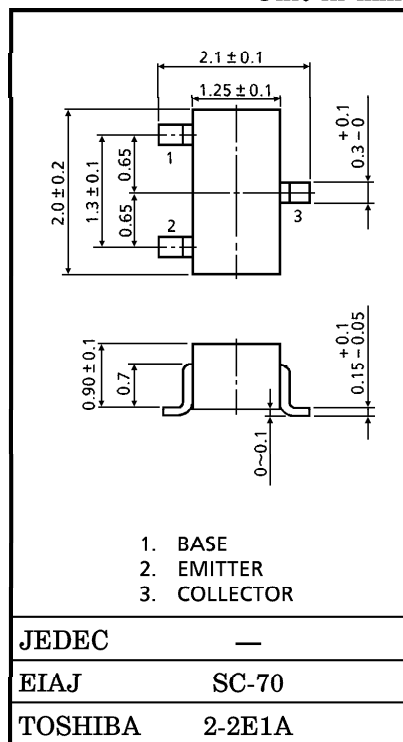
EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2307	10	47
RN2308	22	47
RN2309	47	22

Unit in mm



Weight : 0.006g

MAXIMUM RATINGS (Ta = 25°C)

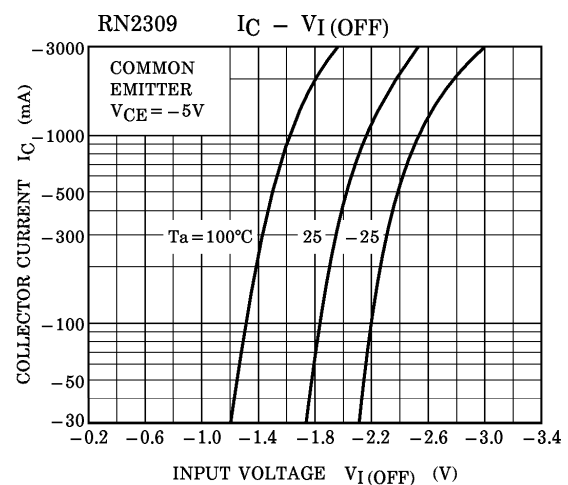
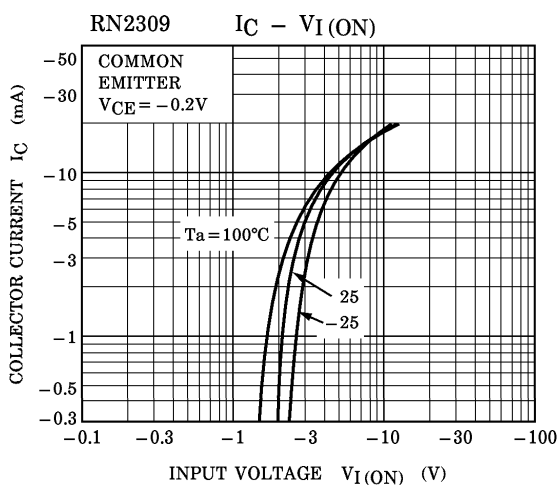
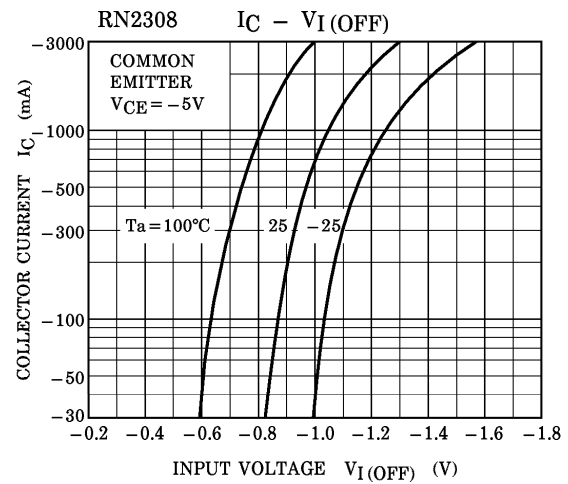
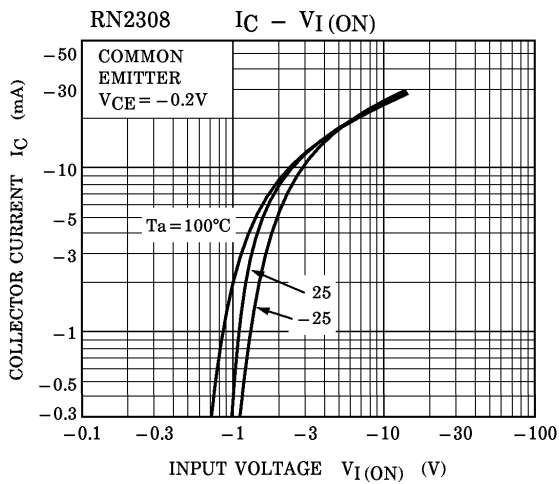
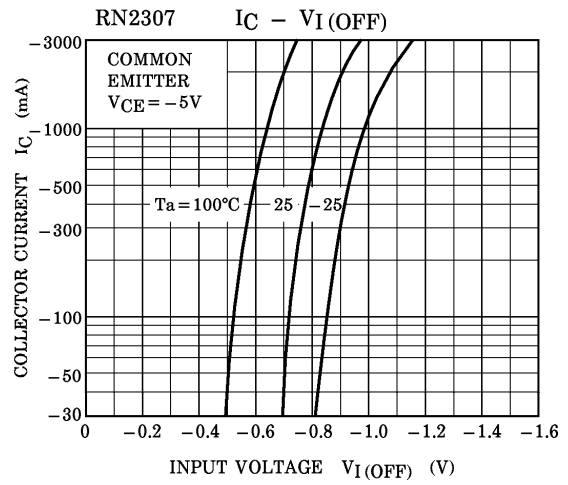
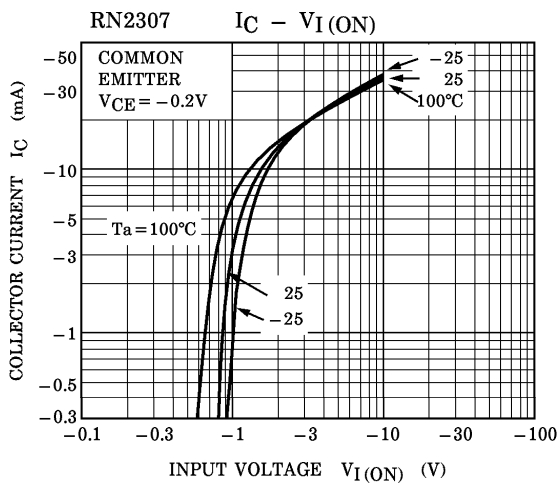
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	-50	V
Collector-Emitter Voltage	V _{CE0}	-50	V
Emitter-Base Voltage	V _{EB0}	-6	V
		-7	
		-15	
Collector Current	I _C	-100	mA
Collector Power Dissipation	P _C	100	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

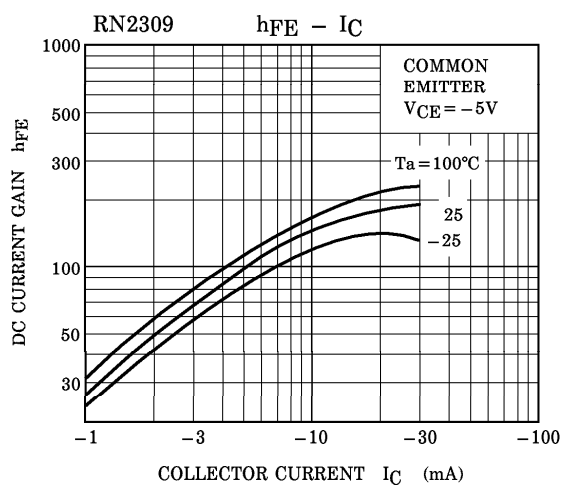
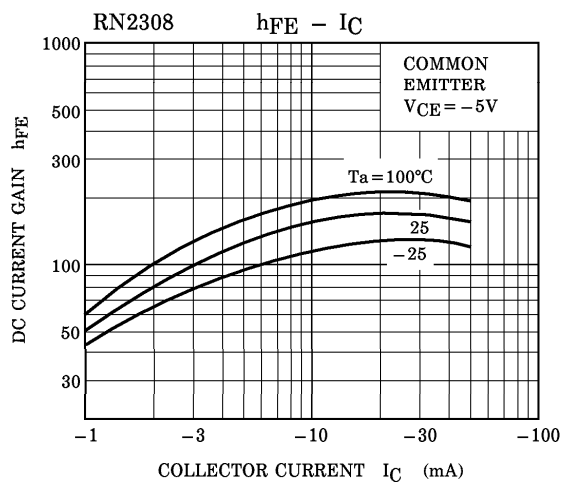
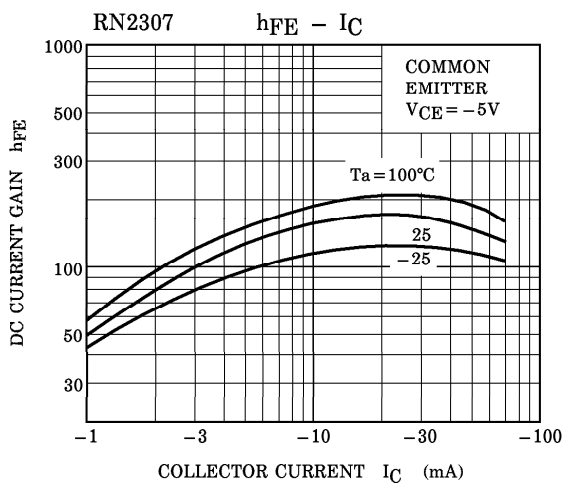
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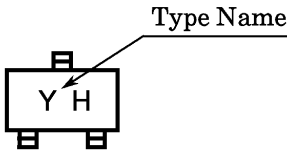
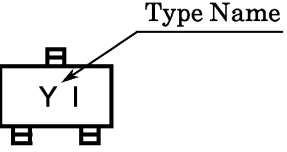
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- The information contained herein is subject to change without notice.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = -50V, I _E = 0	—	—	-100	nA
		ICEO	V _{CE} = -50V, I _B = 0	—	—	-500	
Emitter Cut-off Current	RN2307	IEBO	V _{EB} = -6V, I _C = 0	-0.081	—	-0.15	mA
	RN2308		V _{EB} = -7V, I _C = 0	-0.078	—	-0.145	
	RN2309		V _{EB} = -15V, I _C = 0	-0.167	—	-0.311	
DC Current Gain	RN2307	h _{FE}	V _{CE} = -5V I _C = -10mA	80	—	—	—
	RN2308			80	—	—	
	RN2309			70	—	—	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = -5mA I _B = -0.25mA	—	-0.1	-0.3	V
Input Voltage (ON)	RN2307	V _{I (ON)}	V _{CE} = -0.2V I _C = -5mA	-0.7	—	-1.8	V
	RN2308			-1.0	—	-2.6	
	RN2309			-2.2	—	-5.8	
Input Voltage (OFF)	RN2307	V _{I (OFF)}	V _{CE} = -5V I _C = -0.1mA	-0.5	—	-1.0	V
	RN2308			-0.6	—	-1.16	
	RN2309			-1.5	—	-2.6	
Transition Frequency		f _T	V _{CE} = -10V I _C = -5mA	—	200	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = -10V, I _E = 0 f = 1MHz	—	3	6	pF
Input Resistor	RN2307	R1		7	10	13	kΩ
	RN2308			15.4	22	28.6	
	RN2309			32.9	47	61.1	
Resistor Ratio	RN2307	R1 / R2		0.191	0.213	0.232	—
	RN2308			0.421	0.468	0.515	
	RN2309			1.92	2.14	2.35	





TYPE NAME	MARKING
RN2307	
RN2308	
RN2309	