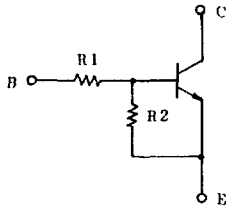


# RN1307, 1308, 1309

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 RN2307~2309

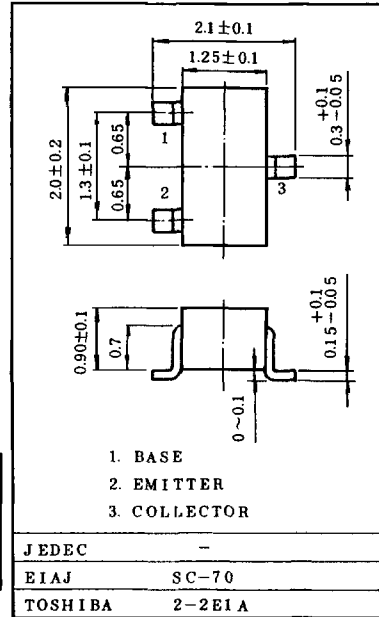
EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1 (k $\Omega$ )	R2 (k $\Omega$ )
RN1307	10	47
RN1308	22	47
RN1309	47	22

Unit in mm



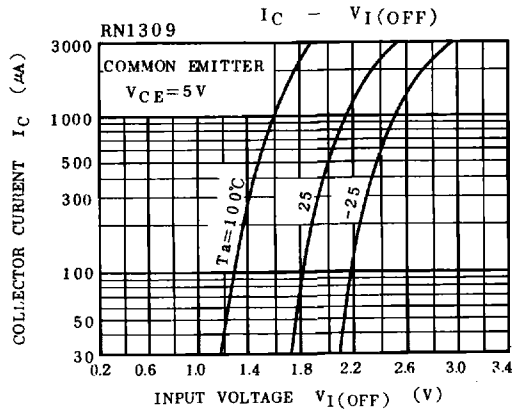
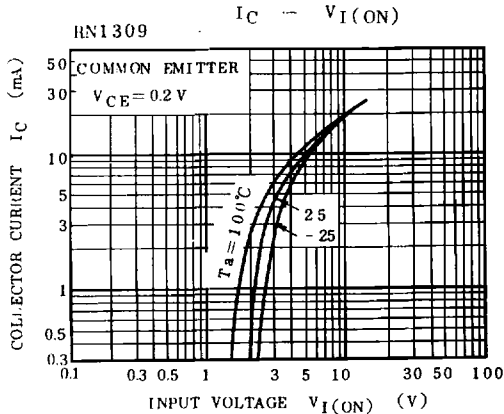
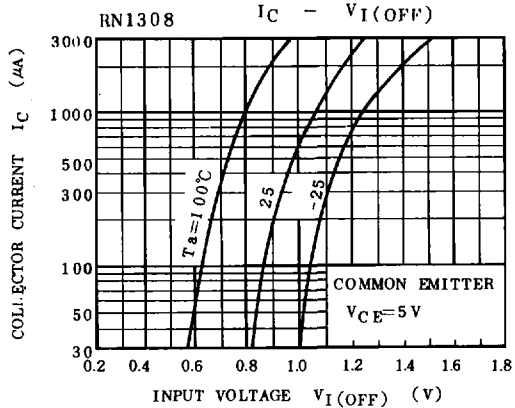
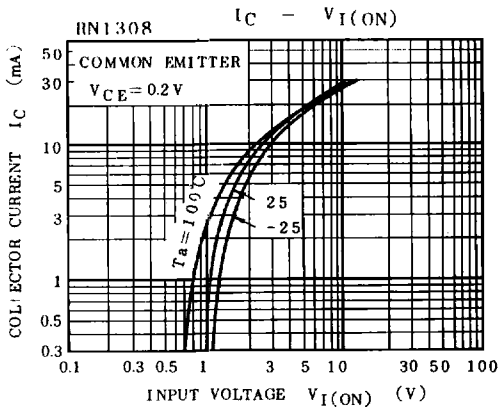
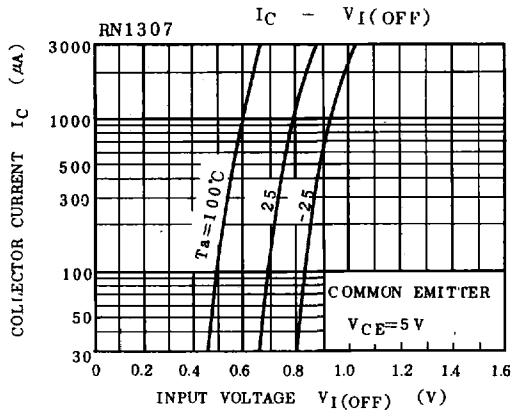
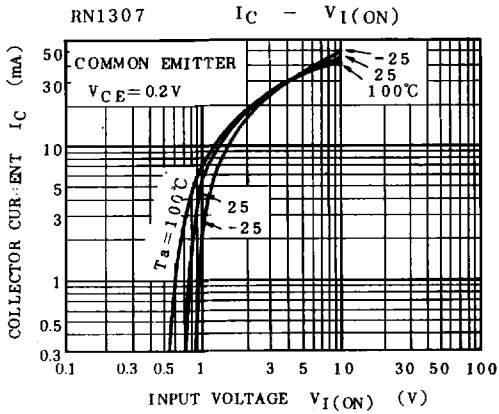
Weight: 0.006g

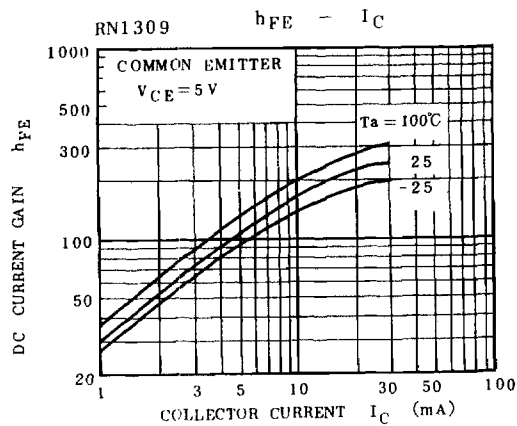
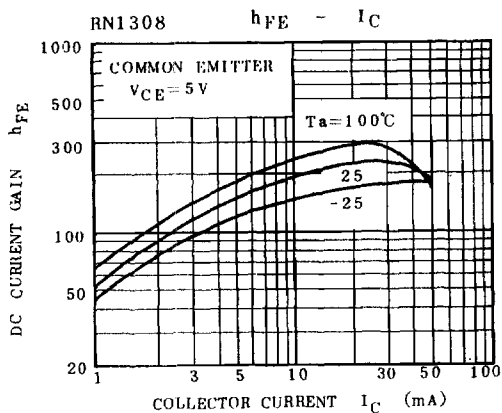
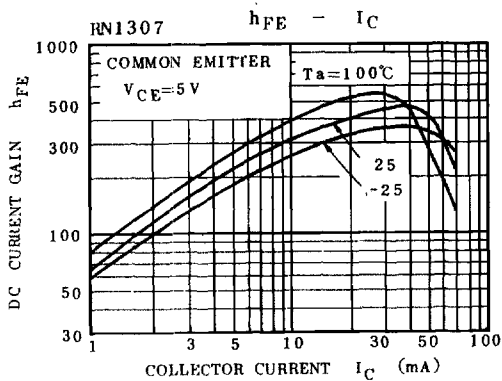
MAXIMUM RATINGS (Ta=25°C)

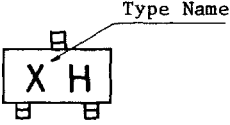
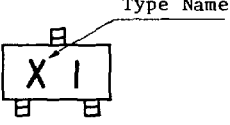
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	50	V
Collector-Emitter Voltage	V <sub>CE0</sub>	50	V
Emitter-Base Voltage	RN1307	6	V
	RN1308	7	
	RN1309	15	
Collector Current	I <sub>C</sub>	100	mA
Collector Power Dissipation	P <sub>C</sub>	100	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I <sub>CBO</sub>	V <sub>CB</sub> =50V, I <sub>E</sub> =0	-	-	100	nA
		I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>B</sub> =0	-	-	500	nA
Emitter Cut-off Current	RN1307	I <sub>EBO</sub>	V <sub>EB</sub> =6V, I <sub>C</sub> =0	0.081	-	0.15	mA
	RN1308		V <sub>EB</sub> =7V, I <sub>C</sub> =0	0.078	-	0.145	
	RN1309		V <sub>EB</sub> =15V, I <sub>C</sub> =0	0.167	-	0.311	
DC Current Gain	RN1307	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80	-	-	-
	RN1308			80	-	-	
	RN1309			70	-	-	
Collector-Emitter Saturation Voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> =5mA, I <sub>B</sub> =0.25mA	-	0.1	0.3	V
Input Voltage (ON)	RN1307	V <sub>I(ON)</sub>	V <sub>CE</sub> =0.2V, I <sub>C</sub> =5mA	0.7	-	1.8	V
	RN1308			1.0	-	2.6	
	RN1309			2.2	-	5.8	
Input Voltage (OFF)	RN1307	V <sub>I(OFF)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1mA	0.5	-	1.0	V
	RN1308			0.6	-	1.16	
	RN1309			1.5	-	2.6	
Transition Frequency		f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	-	250	-	MHz
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0 f=1MHz	-	3	6	pF
Input Resistor	RN1307	R <sub>1</sub>		7	10	13	kΩ
	RN1308			15.4	22	28.6	
	RN1309			32.9	47	61.1	
Resistor Ratio	RN1307	R <sub>1</sub> /R <sub>2</sub>		0.191	0.213	0.232	-
	RN1308			0.421	0.468	0.515	
	RN1309			1.92	2.14	2.35	





TYPE NAME	MARKING
RN1307	
RN1308	
RN1309	