

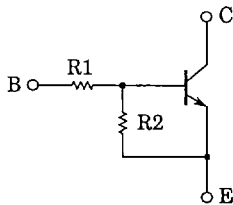
# RN1507~RN1509

SILICON NPN EPITAXIAL TYPE

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

- Including Two Devices in SMV (Super Mini Type with 5 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN2507~2509

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



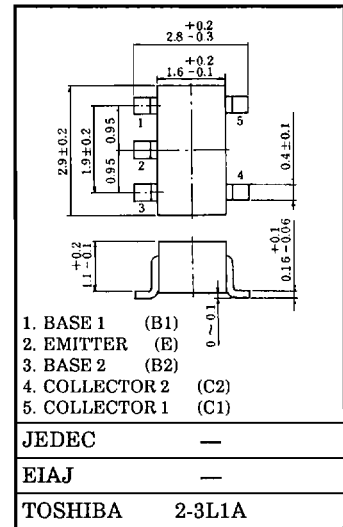
TYPE No.	R1 (kΩ)	R2 (kΩ)
RN1907	10	47
RN1908	22	47
RN1909	47	22

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN1507~1509	V <sub>CB0</sub>	50	V
Collector-Emitter Voltage		V <sub>CE0</sub>	50	V
Emitter-Base Voltage	RN1507	V <sub>EB0</sub>	6	V
	RN1508		7	
	RN1509		15	
Collector Current	RN1507~1509	I <sub>C</sub>	100	mA
Collector Power Dissipation		P <sub>C</sub> *	300	mW
Junction Temperature		T <sub>j</sub>	150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150	°C

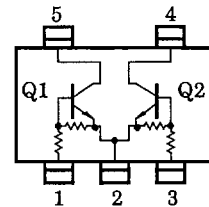
\* : Total Rating

Unit in mm



Weight : 0.014g

EQUIVALENT CIRCUIT (TOP VIEW)

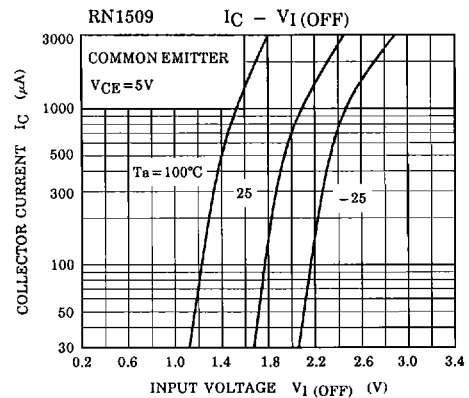
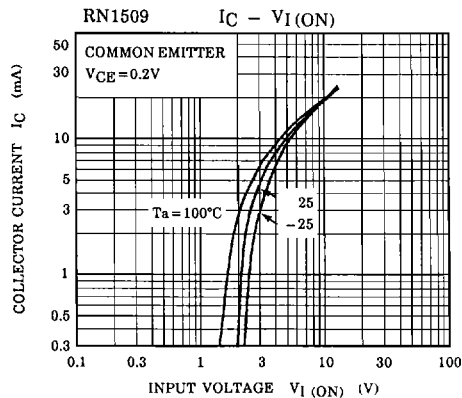
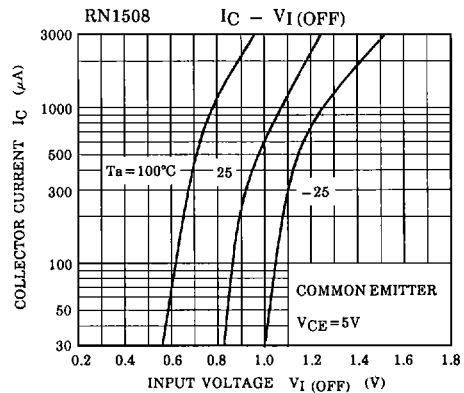
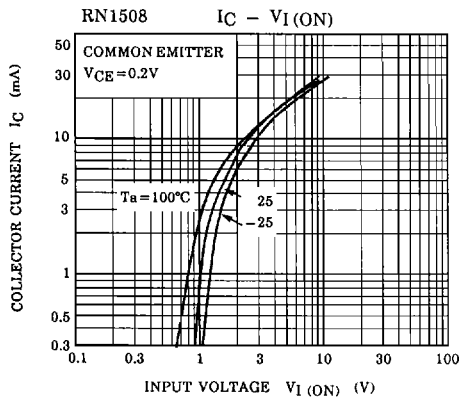
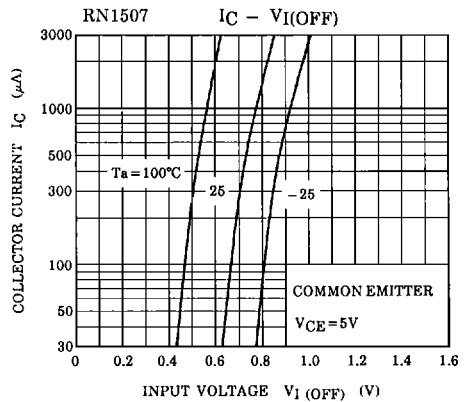
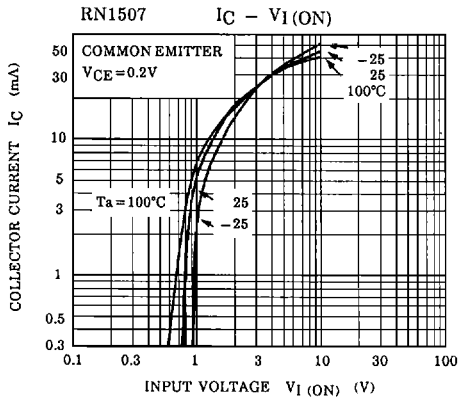


ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

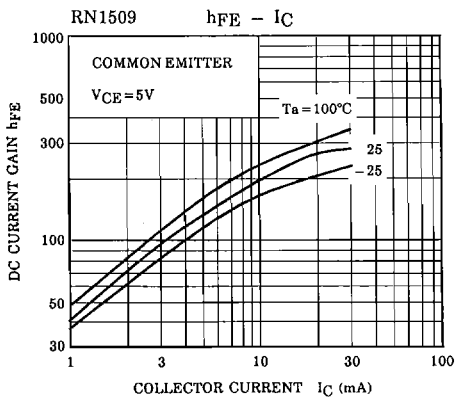
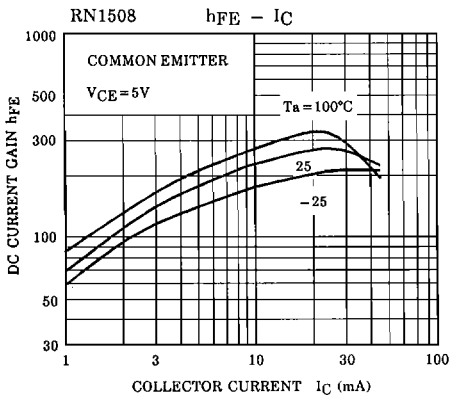
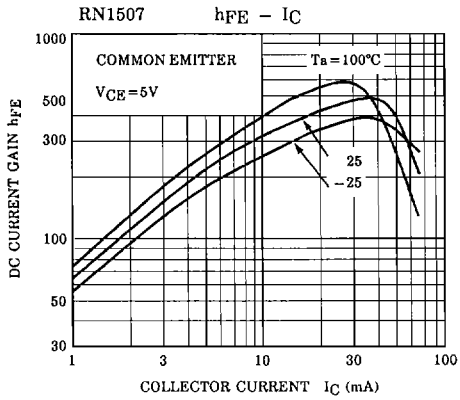
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN1507~ 1509	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0	—	—	100	nA
		ICEO	V <sub>CE</sub> =50V, I <sub>B</sub> =0	—	—	500	nA
Emitter Cut-off Current	RN1507	IEBO	V <sub>EB</sub> =6V, I <sub>C</sub> =0	0.081	—	0.15	mA
	RN1508			0.078	—	0.145	
	RN1509			0.167	—	0.311	
DC Current Gain	RN1507	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80	—	—	
	RN1508			80	—	—	
	RN1509			70	—	—	
Collector-Emitter Saturation Voltage	RN1507~ 1509	V <sub>CE (sat)</sub>	I <sub>C</sub> =5mA I <sub>B</sub> =0.25mA	—	0.1	0.3	V
Input Voltage (ON)	RN1507	V <sub>I (ON)</sub>	V <sub>CE</sub> =0.2V I <sub>C</sub> =5mA	0.7	—	1.8	V
	RN1508			1.0	—	2.6	
	RN1509			2.2	—	5.8	
Input Voltage (OFF)	RN1507	V <sub>I (OFF)</sub>	V <sub>CE</sub> =5V I <sub>C</sub> =0.1mA	0.5	—	1.0	V
	RN1508			0.6	—	1.16	
	RN1509			1.5	—	2.6	
Transition Frequency	RN1507~ 1509	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	—	250	—	MHz
Collector Output Capacitance	RN1507~ 1509	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	—	3	6	pF
Input Resistor	RN1507	R <sub>1</sub>		7	10	13	kΩ
	RN1508			15.4	22	28.6	
	RN1509			32.9	47	61.1	
Resistor Ratio	RN1507	R <sub>1</sub> / R <sub>2</sub>		0.191	0.213	0.232	
	RN1508			0.421	0.468	0.515	
	RN1509			1.92	2.14	2.35	

# RN1507~RN1509

(Q1, Q2 COMMON)

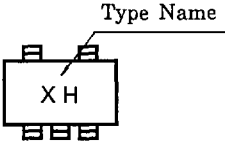
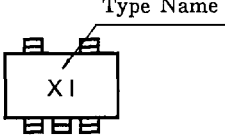
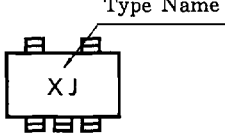


(Q1, Q2 COMMON)



# RN1507~RN1509

---

TYPE NAME	MARKING
RN1507	 <p>The diagram shows a rectangular component with two pins on top and four pins on the bottom. The marking 'X H' is centered on the component. A line points from the text 'Type Name' to the 'H' in the marking.</p>
RN1508	 <p>The diagram shows a rectangular component with two pins on top and four pins on the bottom. The marking 'X I' is centered on the component. A line points from the text 'Type Name' to the 'I' in the marking.</p>
RN1509	 <p>The diagram shows a rectangular component with two pins on top and four pins on the bottom. The marking 'X J' is centered on the component. A line points from the text 'Type Name' to the 'J' in the marking.</p>