

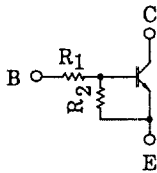
# RN1314, 1315, 1316 RN1317, 1318

(RN1314)

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

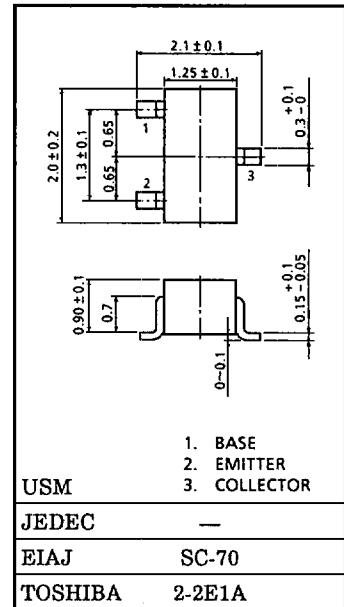
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN2314~RN2318

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R <sub>1</sub> (kΩ)	R <sub>2</sub> (kΩ)
RN1314	1	10
RN1315	2.2	10
RN1316	4.7	10
RN1317	10	4.7
RN1318	47	10

Unit in mm



Weight : 0.006g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Base Voltage	RN1314~1318	VCBO	50	V
Collector-Emitter Voltage		VCEO	50	V
Emitter-Base Voltage	RN1314	VEBO	5	V
	RN1315		6	
	RN1316		7	
	RN1317		15	
	RN1318		25	
Collector Current	RN1314~1318	IC	100	mA
Collector Power Dissipation		PC	100	mW
Junction Temperature		T <sub>j</sub>	150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150	°C

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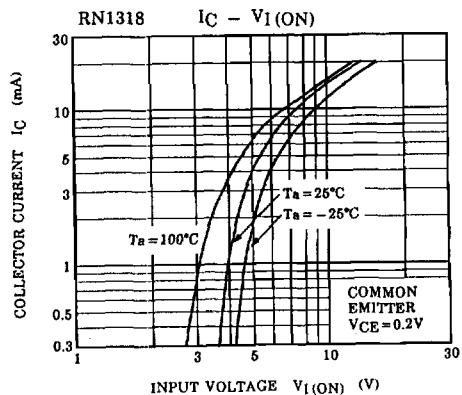
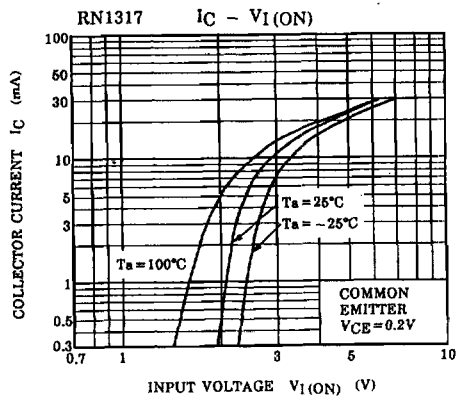
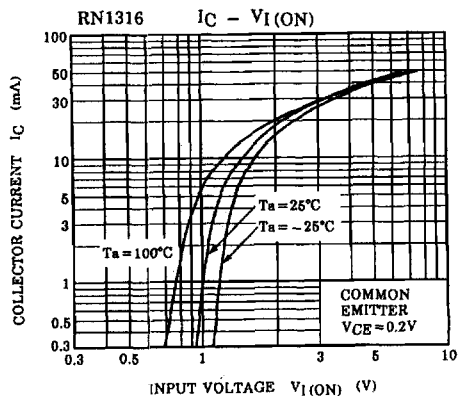
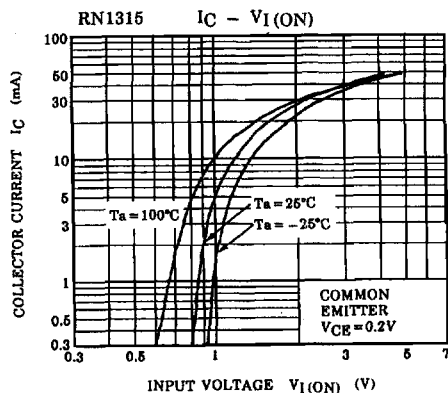
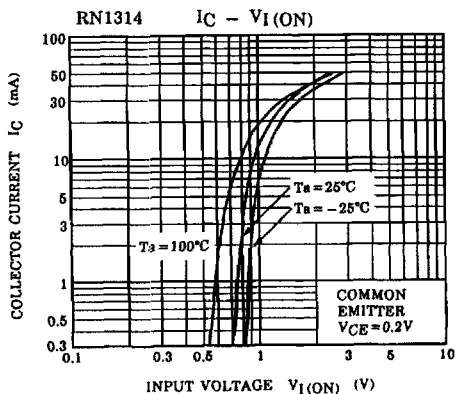
(RN1314)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN1314~1318	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0	—	—	100	nA
	RN1314~1318	ICEO	V <sub>CE</sub> =50V, I <sub>B</sub> =0	—	—	500	nA
Emitter Cut-off Current	RN1314	IEBO	V <sub>EB</sub> =5V, I <sub>C</sub> =0	0.35	—	0.65	mA
	RN1315		V <sub>EB</sub> =6V, I <sub>C</sub> =0	0.37	—	0.71	
	RN1316		V <sub>EB</sub> =7V, I <sub>C</sub> =0	0.36	—	0.68	
	RN1317		V <sub>EB</sub> =15V, I <sub>C</sub> =0	0.78	—	1.46	
	RN1318		V <sub>EB</sub> =25V, I <sub>C</sub> =0	0.33	—	0.63	
DC Current Gain	RN1314~16, 18	hFE	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	50	—	—	
	RN1317			30	—	—	
Collector-Emitter Saturation Voltage	RN1314~1318	V <sub>CE</sub> (sat)	I <sub>C</sub> =5mA, I <sub>B</sub> =0.25mA	—	0.1	0.3	V
Input Voltage (ON)	RN1314	V <sub>I</sub> (ON)	V <sub>CE</sub> =0.2V, I <sub>C</sub> =5mA	0.6	—	2.0	V
	RN1315			0.7	—	2.5	
	RN1316			0.8	—	2.5	
	RN1317			1.5	—	3.5	
	RN1318			2.5	—	10.0	
Input Voltage (OFF)	RN1314	V <sub>I</sub> (OFF)	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1mA	0.3	—	0.9	V
	RN1315			0.3	—	1.0	
	RN1316			0.3	—	1.1	
	RN1317			0.3	—	2.3	
	RN1318			0.5	—	5.7	
Transition Frequency	RN1314~1318	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	—	250	—	MHz
Collector Output Capacitance	RN1314~1318	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	—	3.0	6.0	pF
Input Resistor	RN1314	R <sub>1</sub>	—	0.7	1.0	1.3	kΩ
	RN1315			1.54	2.2	2.86	
	RN1316			3.29	4.7	6.11	
	RN1317			7.0	10.0	13.0	
	RN1318			32.9	47.0	61.1	
Resistor Ratio	RN1314	R <sub>1</sub> /R <sub>2</sub>	—	—	0.1	—	
	RN1315			—	0.22	—	
	RN1316			—	0.47	—	
	RN1317			—	2.13	—	
	RN1318			—	4.7	—	

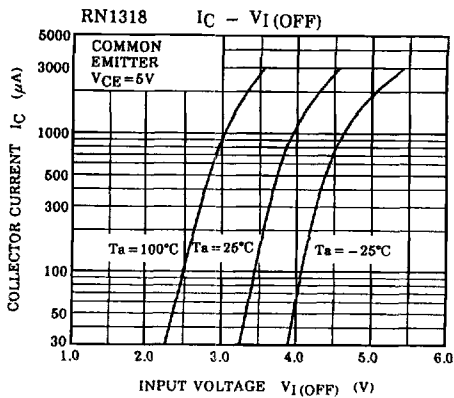
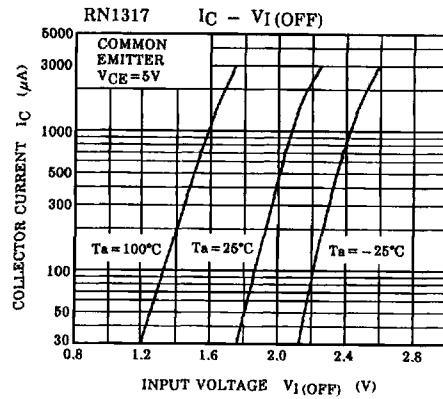
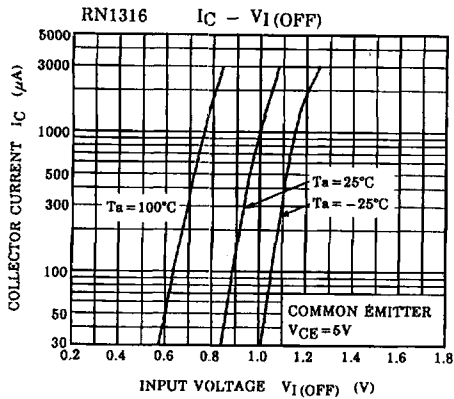
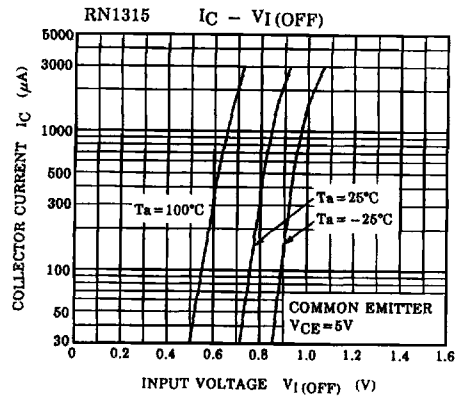
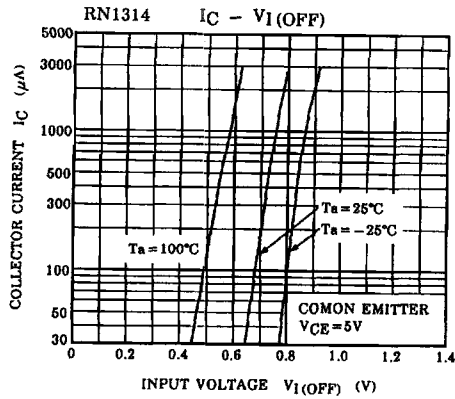
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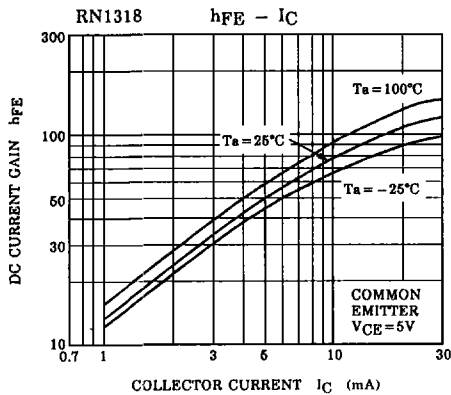
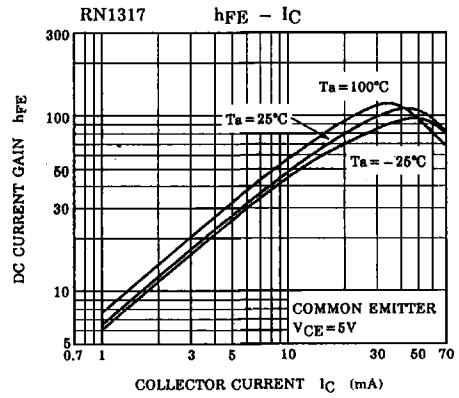
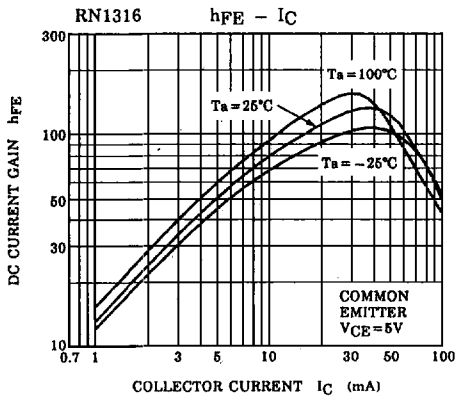
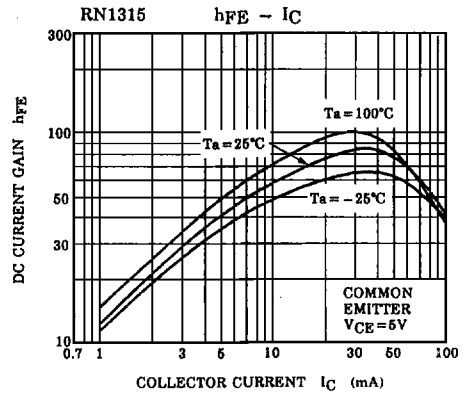
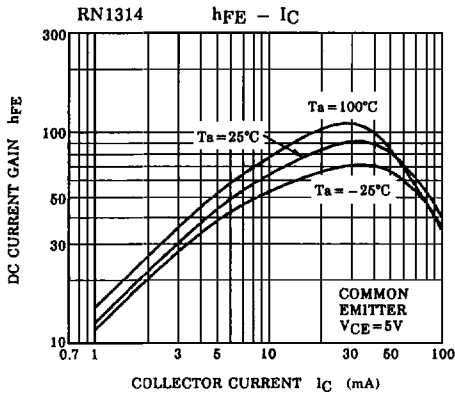
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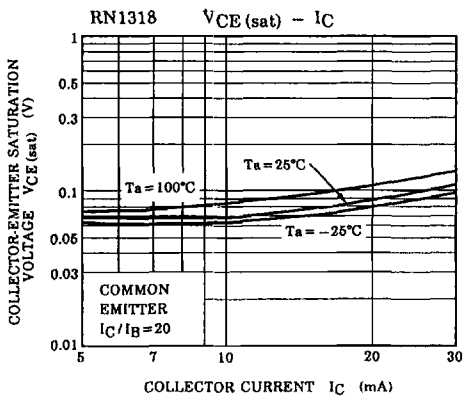
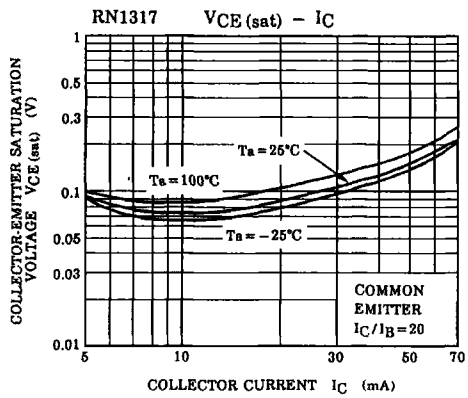
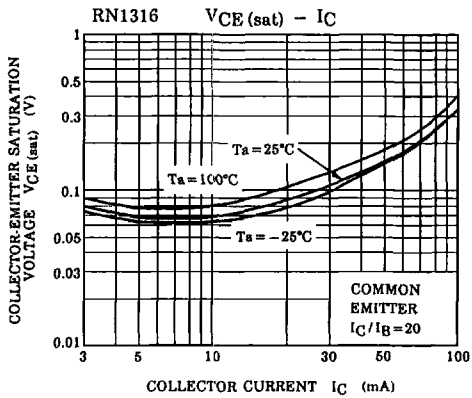
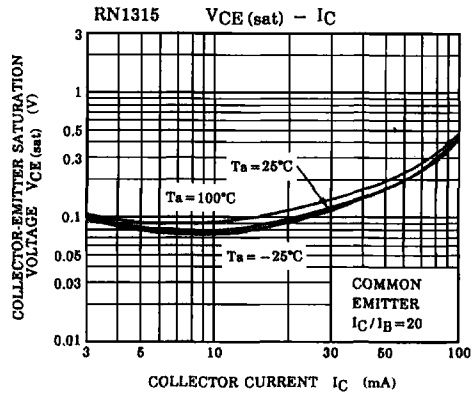
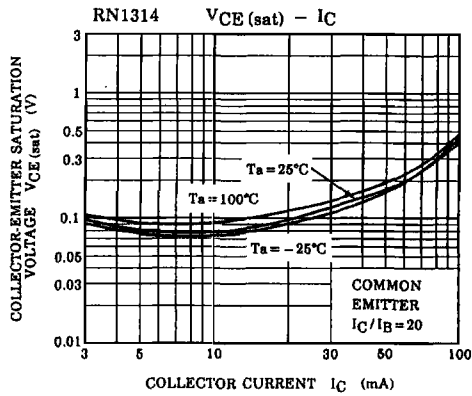
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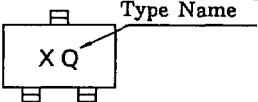
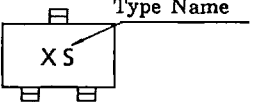
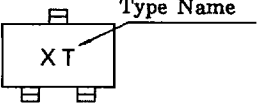
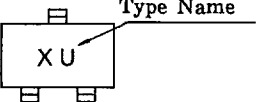
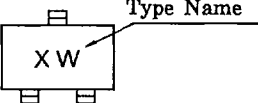
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**RN1314, 1315, 1316  
RN1317, 1318**

(RN1314)

TYPE NAME	MARKING
RN1314	 A rectangular box containing the text "X Q". Above the box is a small square symbol. A line extends from the top right corner of the box to the text "Type Name". Below the box are two small square symbols.
RN1315	 A rectangular box containing the text "X S". Above the box is a small square symbol. A line extends from the top right corner of the box to the text "Type Name". Below the box are two small square symbols.
RN1316	 A rectangular box containing the text "X T". Above the box is a small square symbol. A line extends from the top right corner of the box to the text "Type Name". Below the box are two small square symbols.
RN1317	 A rectangular box containing the text "X U". Above the box is a small square symbol. A line extends from the top right corner of the box to the text "Type Name". Below the box are two small square symbols.
RN1318	 A rectangular box containing the text "X W". Above the box is a small square symbol. A line extends from the top right corner of the box to the text "Type Name". Below the box are two small square symbols.