

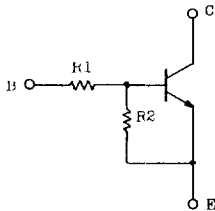
# RN1401, 1402, 1403 RN1404, 1405, 1406

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

**FEATURES:**

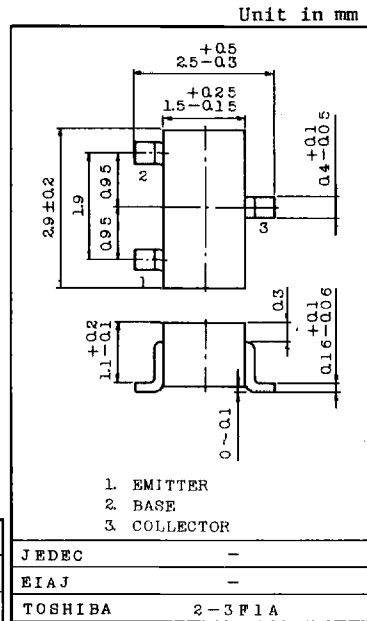
- . With Built-in Bias Resistors
- . Simplify Circuit Design
- . Reduce a Quantity of Parts and Manufacturing Process
- . Complementary to RN2401~RN2406

**EQUIVALENT CIRCUIT**



**BIAS RESISTOR VALUES**

TYPE No.	R1(kΩ)	R2(kΩ)
RN1401	4.7	4.7
RN1402	10	10
RN1403	22	22
RN1404	47	47
RN1405	2.2	47
RN1406	4.7	47



Weight : 0.012g

**MAXIMUM RATINGS (Ta=25°C)**

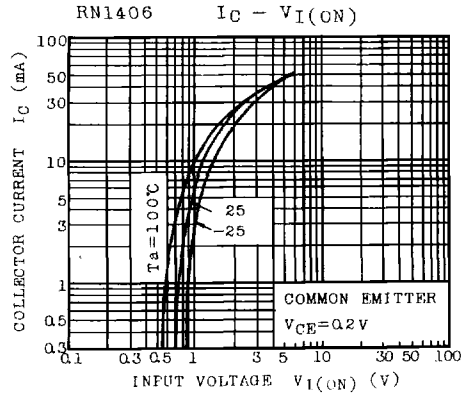
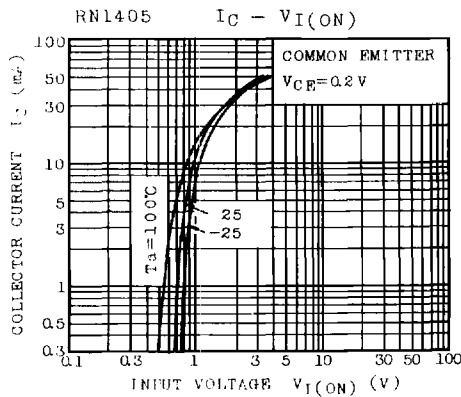
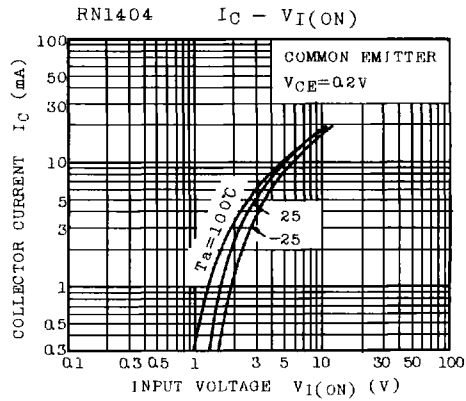
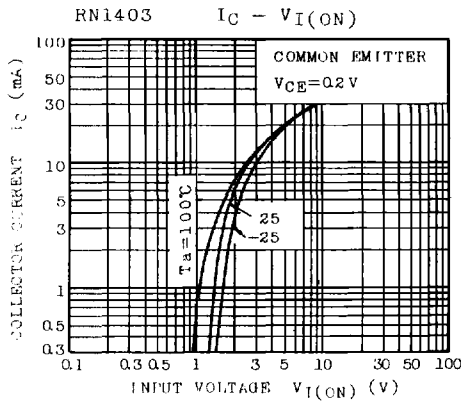
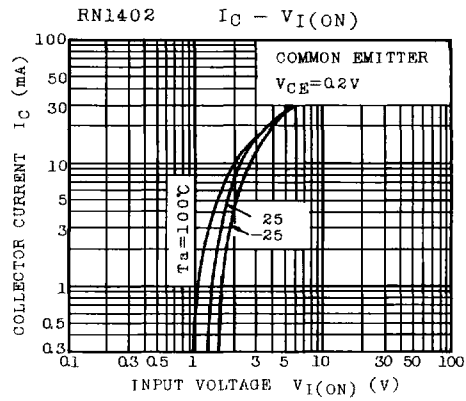
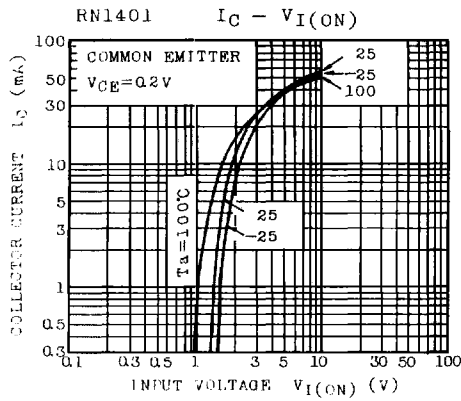
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN1401~1406	V <sub>CBO</sub>	50	V
Collector-Emitter Voltage		V <sub>CEO</sub>	50	V
Emitter-Base Voltage	RN1401~1404	V <sub>EB0</sub>	10	V
	RN1405~1406		5	
Collector Current	RN1401~1406	I <sub>C</sub>	100	mA
Collector Power Dissipation		P <sub>C</sub>	200	mW
Junction Temperature		T <sub>j</sub>	150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150	°C

**RN1401, 1402, 1403**  
**RN1404, 1405, 1406**

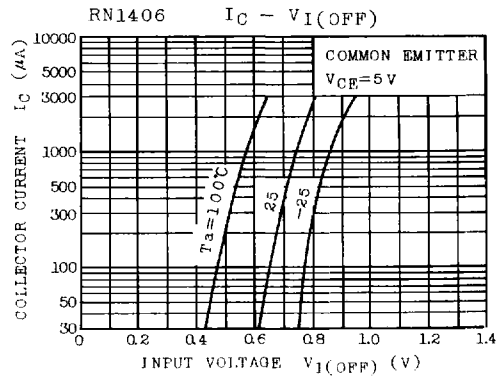
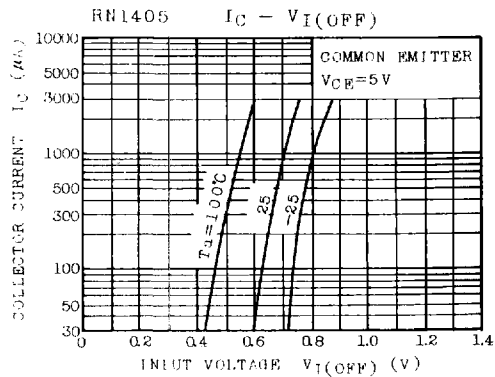
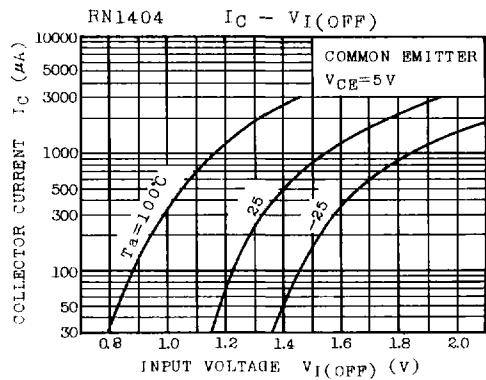
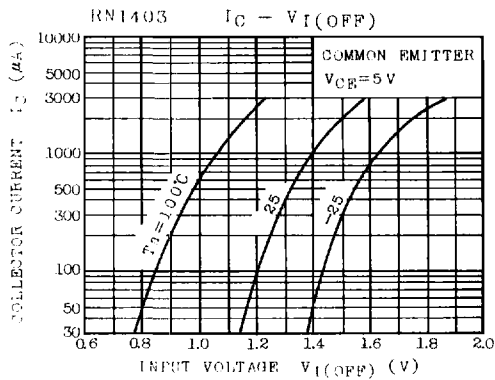
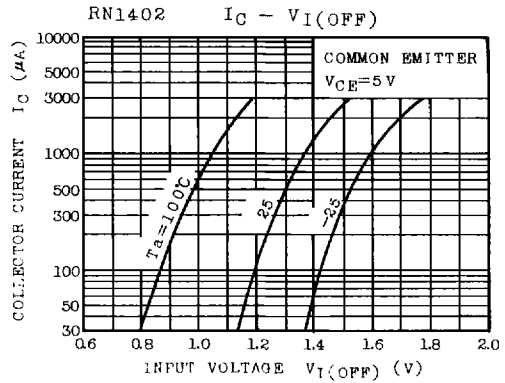
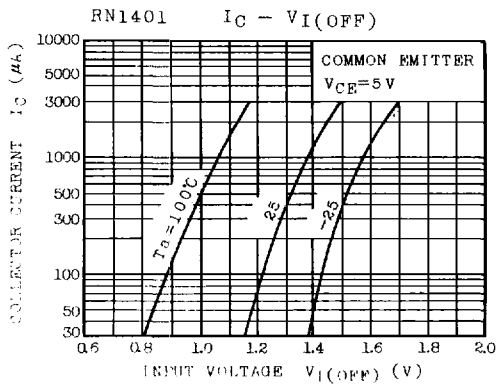
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN1401~1406	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	
Emitter Cut-off Current	RN1401	I <sub>EBO</sub>	V <sub>EB</sub> =10V, I <sub>C</sub> =0	0.82	-	1.52	mA
	RN1402			0.38	-	0.71	
	RN1403			0.17	-	0.33	
	RN1404			0.082	-	0.15	
	RN1405		V <sub>EB</sub> =5V, I <sub>C</sub> =0	0.078	-	0.145	
	RN1406			0.074	-	0.138	
DC Current Gain	RN1401	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	30	-	-	-
	RN1402			50	-	-	
	RN1403			70	-	-	
	RN1404			80	-	-	
	RN1405			80	-	-	
	RN1406			80	-	-	
Collector-Emitter Saturation Voltage	RN1401~1406	V <sub>CE(sat)</sub>	I <sub>C</sub> =5mA, I <sub>B</sub> =0.25mA	-	0.1	0.3	V
Input Voltage (ON)	RN1401	V <sub>I(ON)</sub>	V <sub>CE</sub> =0.2V, I <sub>C</sub> =5mA	1.1	-	2.0	V
	RN1402			1.2	-	2.4	
	RN1403			1.3	-	3.0	
	RN1404			1.5	-	5.0	
	RN1405			0.6	-	1.1	
	RN1406			0.7	-	1.3	
Input Voltage (OFF)	RN1401~1404	V <sub>I(OFF)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1mA	1.0	-	1.5	V
	RN1405~1406			0.5	-	0.8	
Transition Frequency	RN1401~1406	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	-	250	-	MHz
Collector Output Capacitance	RN1401~1406	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0 f=1MHz	-	3	6	pF
Input Resistor	RN1401	R <sub>1</sub>		3.29	4.7	6.11	kΩ
	RN1402			7	10	13	
	RN1403			15.4	22	28.6	
	RN1404			32.9	47	61.1	
	RN1405			1.54	2.2	2.86	
	RN1406			3.29	4.7	6.11	
Resistor Ratio	RN1401~1404	R <sub>1</sub> /R <sub>2</sub>		0.9	1.0	1.1	-
	RN1405			0.0421	0.0468	0.0515	
	RN1406			0.09	0.1	0.11	

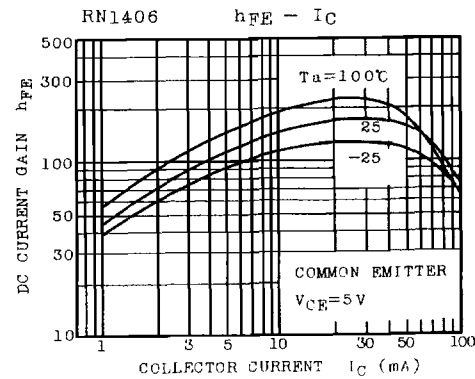
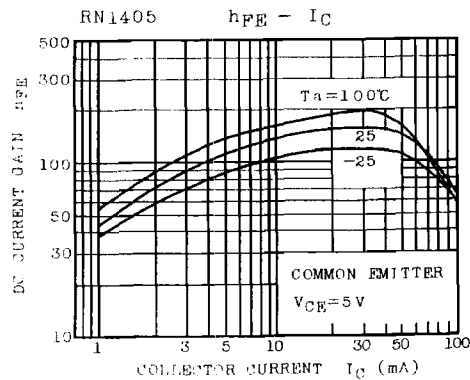
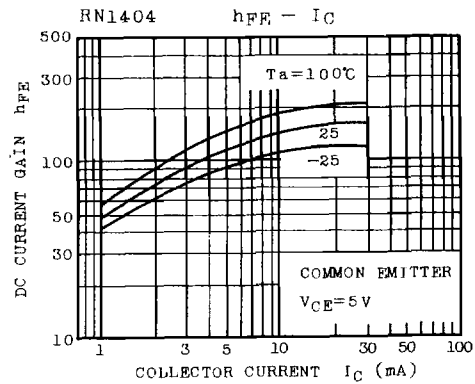
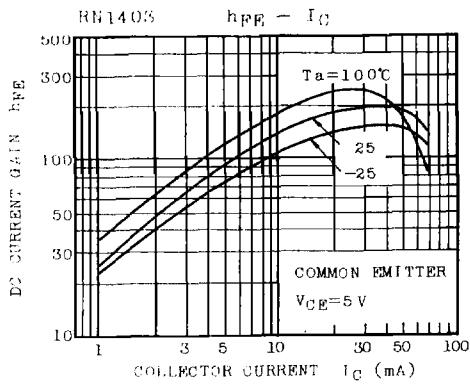
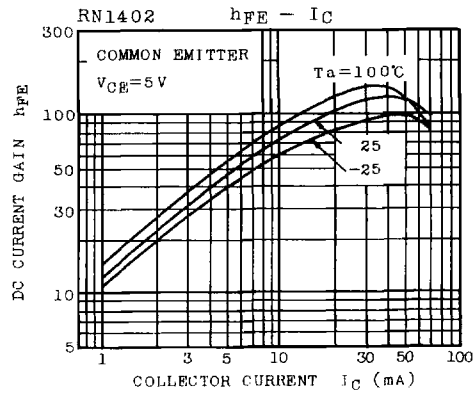
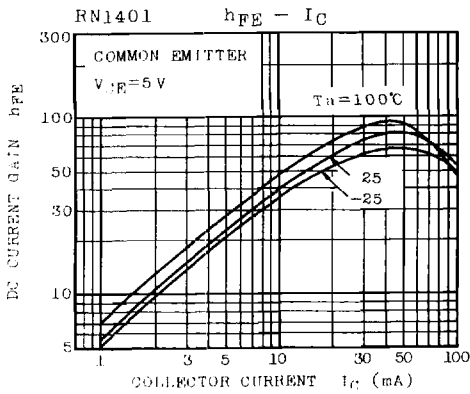
**RN1401, 1402, 1403**  
**RN1404, 1405, 1406**



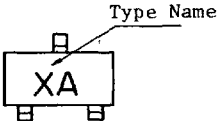
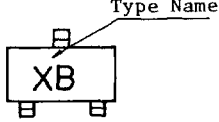
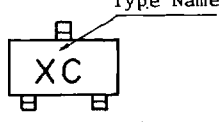
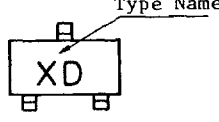
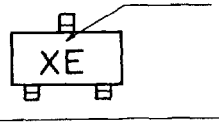
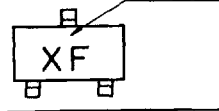
# RN1401, 1402, 1403 RN1404, 1405, 1406



**RN1401, 1402, 1403  
RN1404, 1405, 1406**



RN1401, 1402, 1403  
RN1404, 1405, 1406

TYPE NAME	MARKING
RN1401	 <p>The diagram shows a rectangular box with the letters 'XA' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>
RN1402	 <p>The diagram shows a rectangular box with the letters 'XB' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>
RN1403	 <p>The diagram shows a rectangular box with the letters 'XC' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>
RN1404	 <p>The diagram shows a rectangular box with the letters 'XD' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>
RN1405	 <p>The diagram shows a rectangular box with the letters 'XE' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>
RN1406	 <p>The diagram shows a rectangular box with the letters 'XF' inside. A small square symbol is positioned above the box, and a line points from the text 'Type Name' to this symbol. The box has four small square feet at its base.</p>