

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

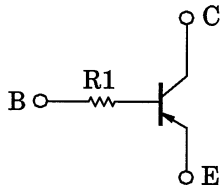
RN2412,RN2413

Switching, Inverter Circuit, Interface Circuit
And Driver Circuit Applications

Unit in mm

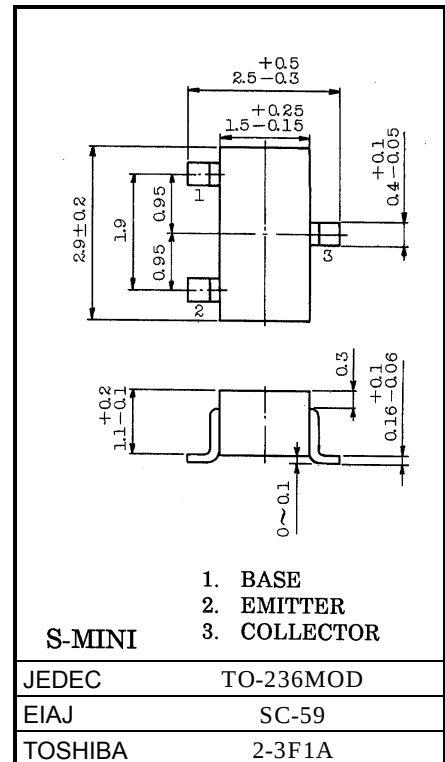
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1412, RN1413

Equivalent Circuit



Maximum Ratings (Ta = 25°C)

Characterisitic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C



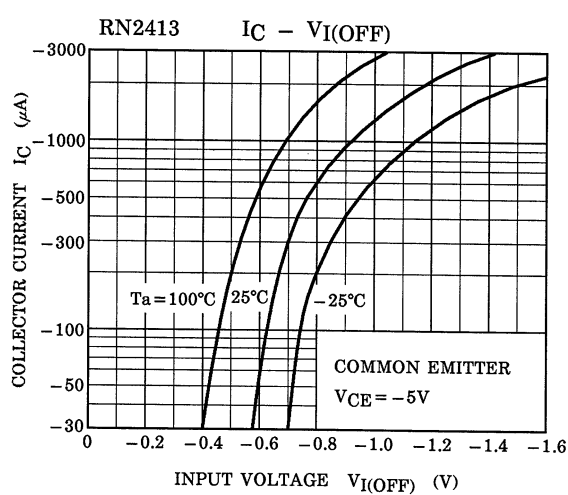
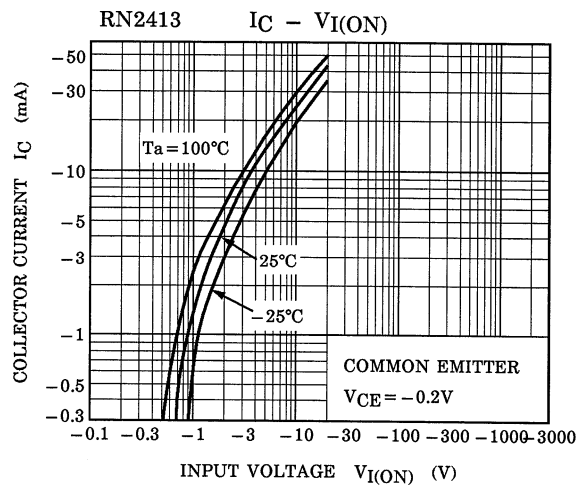
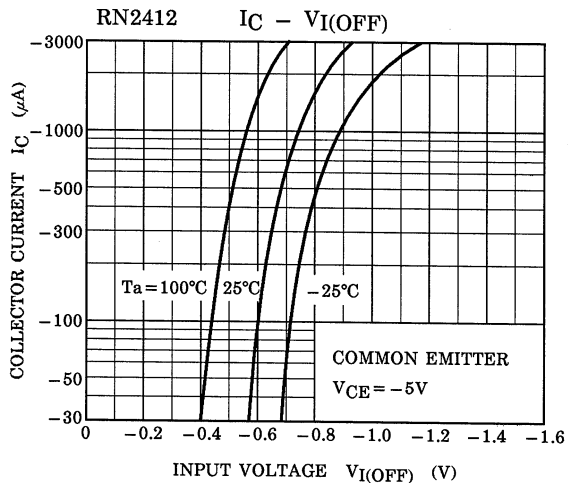
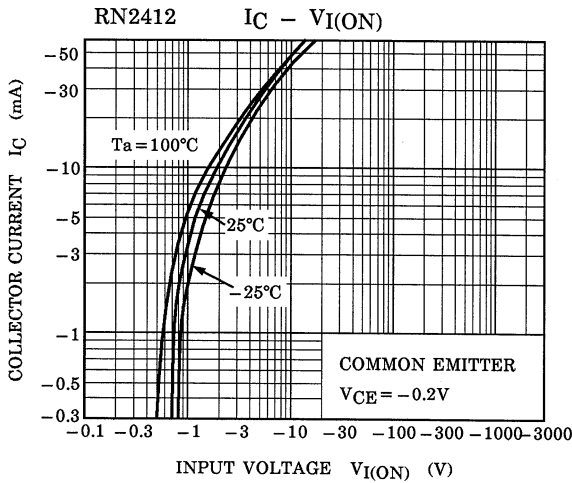
Weight: 0.012g

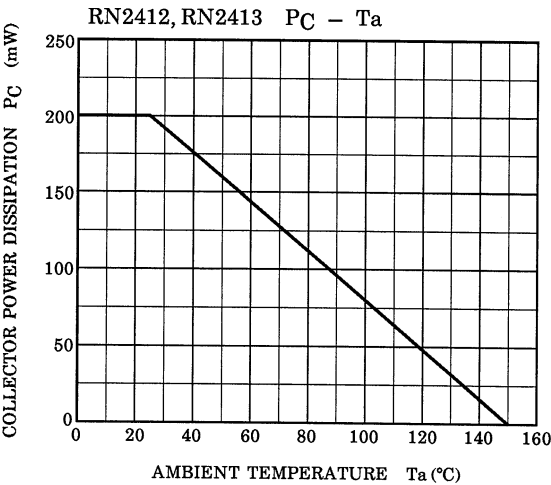
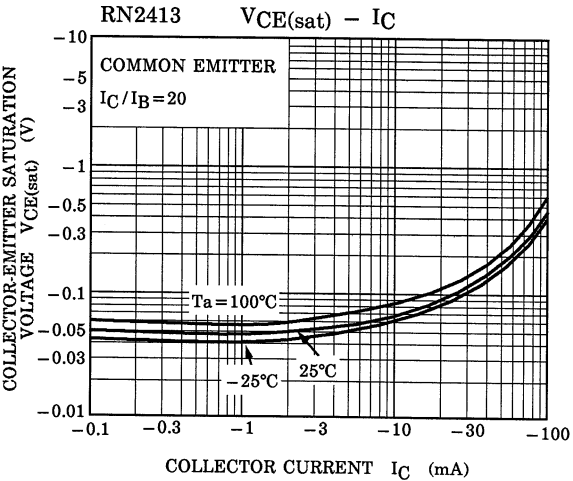
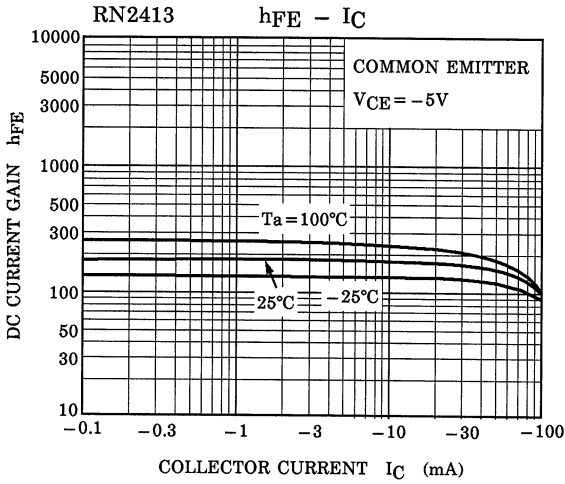
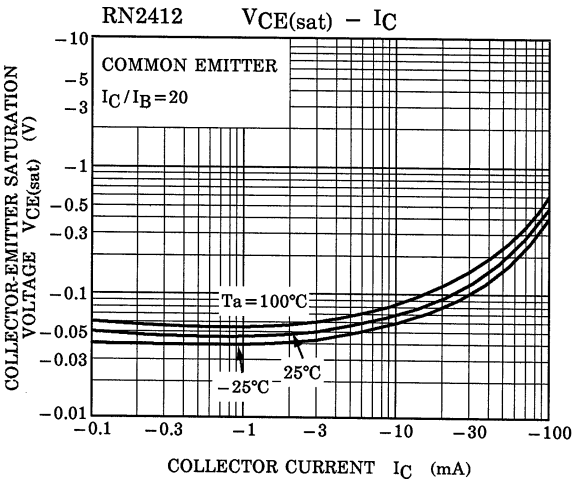
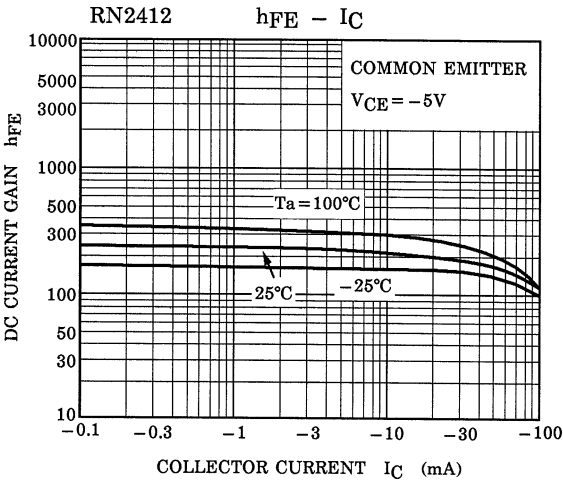
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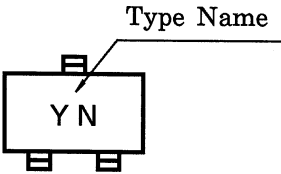
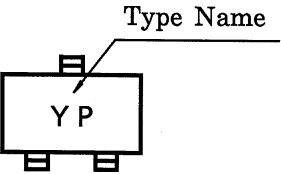
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Electrical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		ICBO	—	V _{CB} = -50V, I _E = 0	—	—	-100	nA
Emitter cut-off current		IEBO	—	V _{EB} = -5V, I _C = 0	—	—	-100	nA
DC current gain		h _{FE}	—	V _{CE} = -5V, I _C = -1mA	120	—	400	—
Collector-emitter saturation voltage		V _{CE} (sat)	—	I _C = -5mA, I _B = -0.25mA	—	-0.1	-0.3	V
Translation frequency		f _T	—	V _{CE} = -10V, I _C = -5mA	—	250	—	MHz
Collector output capacitance		C _{ob}	—	V _{CB} = -10V, I _E = 0, f = 1MHz	—	3	6	pF
Input resistor	RN2412	R1	—	—	15.4	22	28.6	kΩ
	RN2413				32.9	47	61.1	





Type Name	Marking
RN2412	 The diagram shows a rectangular component with two pins at the top and two at the bottom. Inside the rectangle, the characters 'Y N' are printed. A leader line points from the text 'Type Name' to the 'Y' character.
RN2413	 The diagram shows a rectangular component with two pins at the top and two at the bottom. Inside the rectangle, the characters 'Y P' are printed. A leader line points from the text 'Type Name' to the 'Y' character.