

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

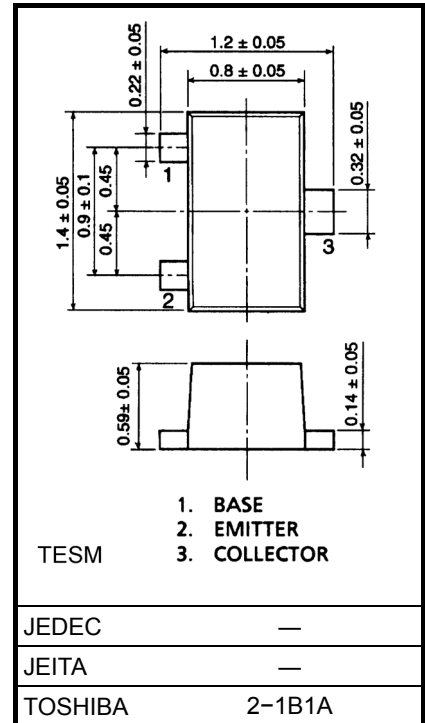
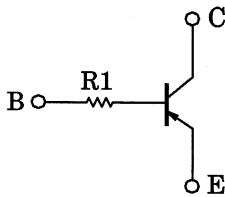
RN2131FT,RN2132FT

Switching, Inverter Circuit, Interface Circuit and Driver Circuit Applications

Unit : mm

- Extra small package(TESM) is applicable for extra high density fabrication.
- Since bias resistance is built in the transistor, the miniaturization of the apparatus by curtailment of the number of parts and laborsaving of an assembly are possible.
- Complementary to RN1131FT, RN1132FT

Equivalent Circuit



Absolute Maximum Ratings (Ta = 25°C)

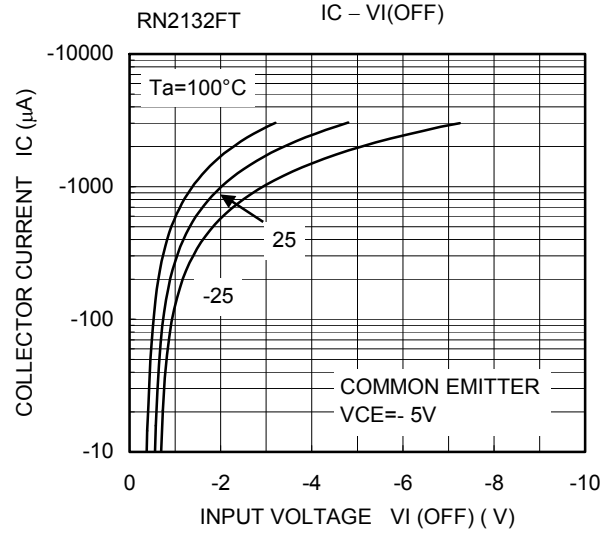
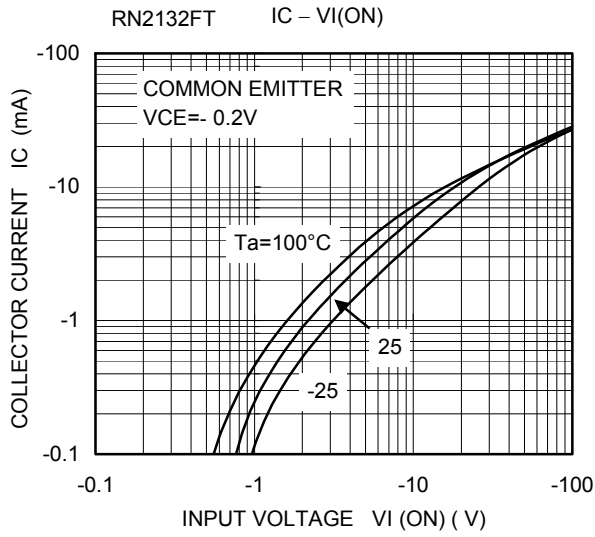
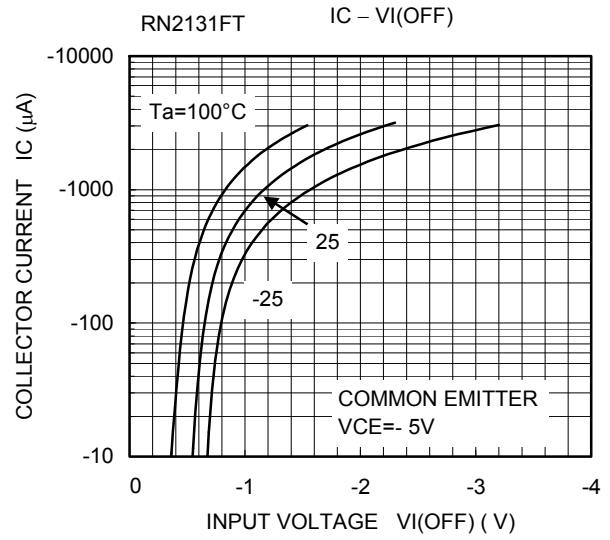
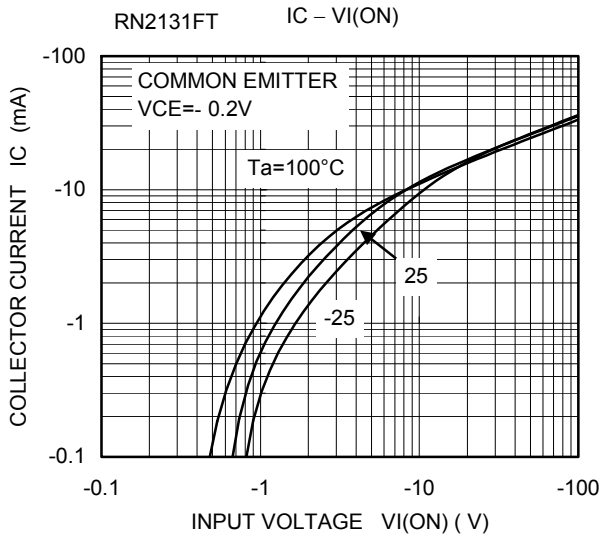
Characteristic	Symbol	Rating	A
Collector-base voltage	V _{CB0}	-50	V
Collector-emitter voltage	V _{CEO}	-50	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	I _C	-100	mA
Collector power dissipation	P _C	100	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55~150	°C

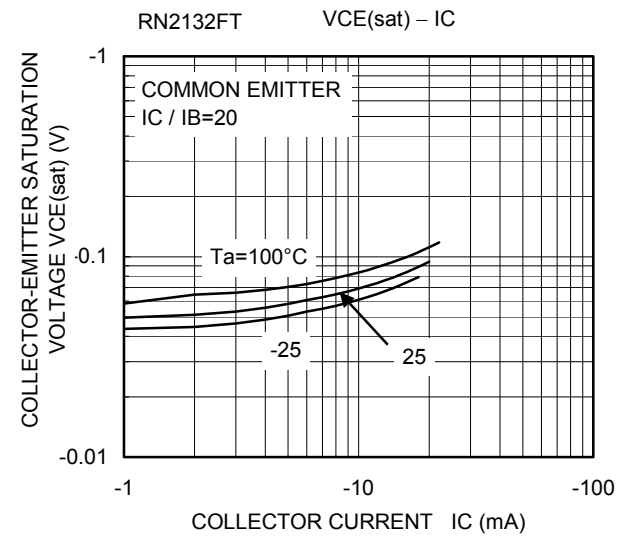
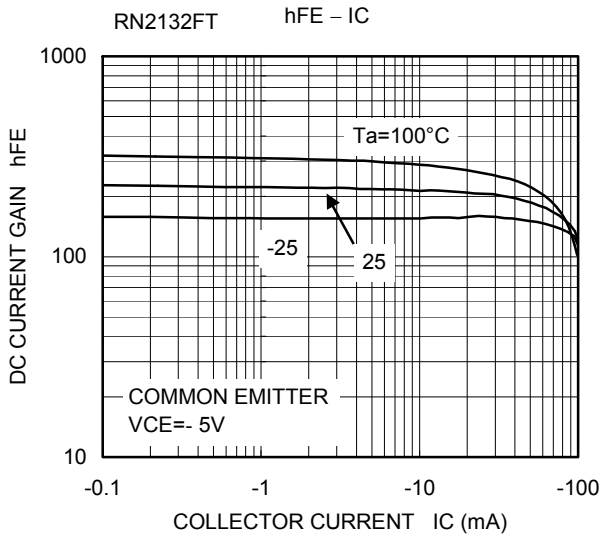
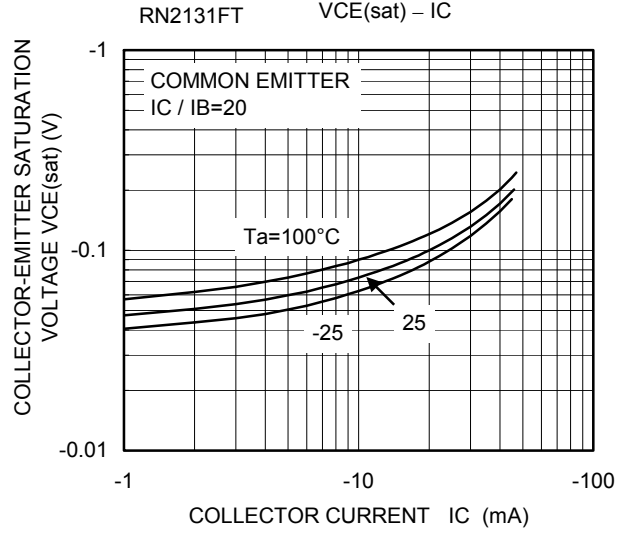
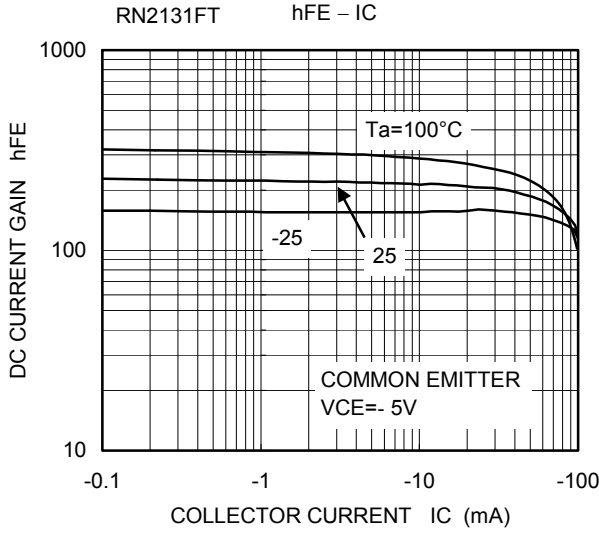
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

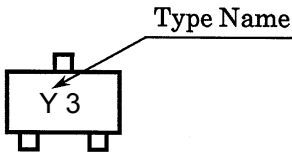
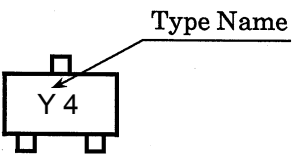
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	—	V _{CB} = -50V, I _E = 0	—	—	-100	nA
Emitter cut-off current	I _{EBO}	—	V _{EB} = -5V, I _C = 0	—	—	-100	nA
DC current gain	h _{FE}	—	V _{CE} = -5V, I _C = -1mA	120	—	700	
Collector-emitter saturation voltage	V _{CE (sat)}	—	I _C = -5mA, I _B = -0.25mA	—	-0.1	-0.3	V
Transition frequency	f _T	—	V _{CE} = -10V, I _C = -5mA	—	200	—	MHz
Collector output capacitance	C _{ob}	—	V _{CB} = -10V, I _E = 0, f = 1MHz	—	3	—	pF
Input resistor	RN2131FT	R1	—	70	100	130	kΩ
	RN2132FT			140	200	260	





Type Name	Marking
RN2131FT	 <p>The diagram shows a rectangular component with a small square protrusion on top and two small square protrusions on the bottom. Inside the rectangle, the text 'Y 3' is printed. An arrow points from the text 'Type Name' to the 'Y 3' marking.</p>
RN2132FT	 <p>The diagram shows a rectangular component with a small square protrusion on top and two small square protrusions on the bottom. Inside the rectangle, the text 'Y 4' is printed. An arrow points from the text 'Type Name' to the 'Y 4' marking.</p>

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20070701-EN GENERAL

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