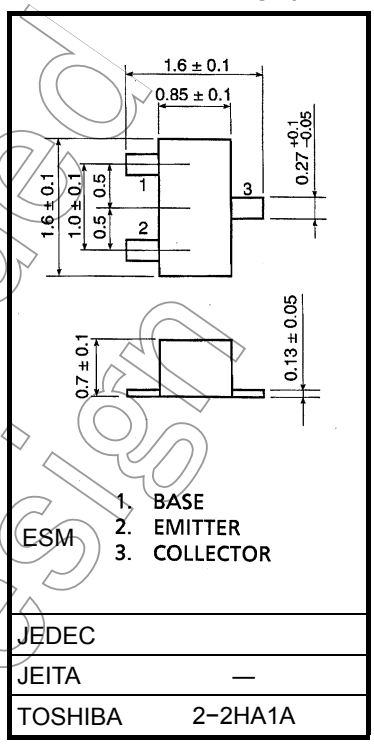
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

RN2130F

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 RN1130F

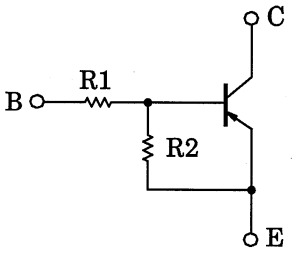
Unit : mm



JEDEC	
JEITA	—
TOSHIBA	2−2HA1A

Weight : 2.3mg(typ.)

Equivalent Circuit



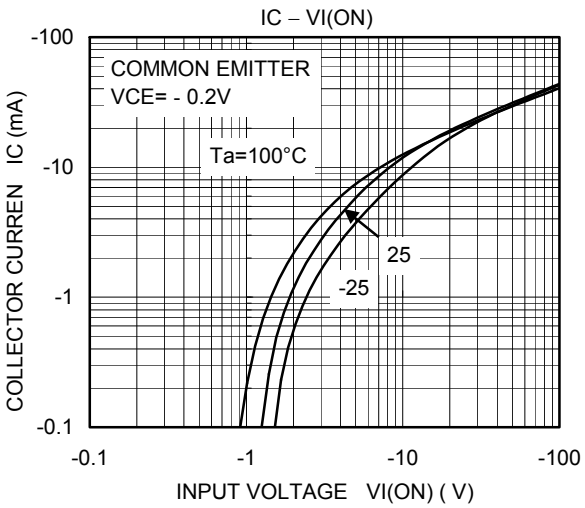
Absolute Maximum Ratings (Ta = 25°C)

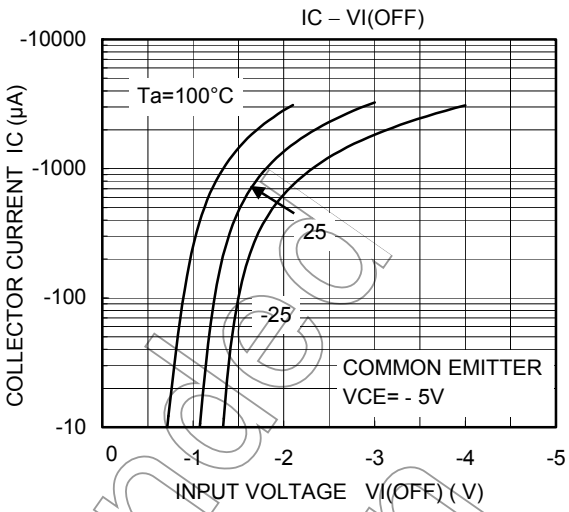
Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	−50	V
Collector-emitter voltage	V_{CEO}	−50	V
Emitter-base voltage	V_{EBO}	−10	V
Collector current	I_C	−100	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	−55 to150	°C

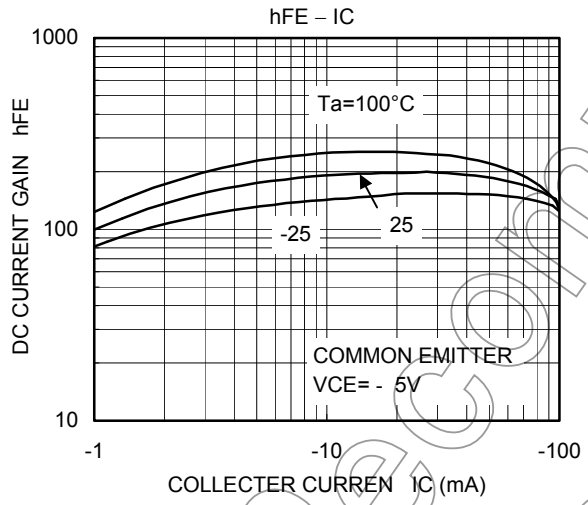
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

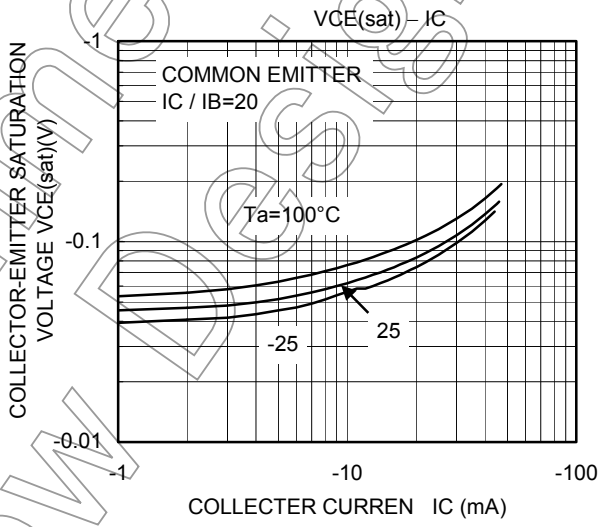
Electrical Characteristics (Ta = 25°C)

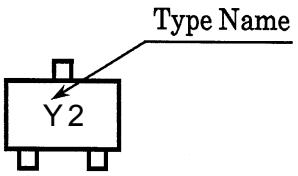
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	V_{CB} = −50V, I_E = 0	—	—	−100	nA
	I_{CEO}	V_{CB} = −50V, I_B = 0	—	—	−500	nA
Emitter cut-off current	I_{EBO}	V_{EB} = −10V, I_C = 0	−38	—	−72	μA
DC current gain	h_{FE}	V_{CE} = −5V, I_C = −10mA	100	—	—	—
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C = −5mA, I_B = −0.25mA	—	−0.1	−0.3	V
Input voltage(ON)	$V_{I(ON)}$	V_{CE} = −0.2V, I_C = −5mA	−1.7	—	−8.2	V
Input voltage(OFF)	$V_{I(OFF)}$	V_{CE} = −5V, I_C = − 0.1mA	−1.0	—	−1.6	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 resistance	R1	—	70	100	130	kΩ
Resistance ratio	R1/R2	—	0.8	1.0	1.2	—









Type Name	Marking
RN2130F	

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