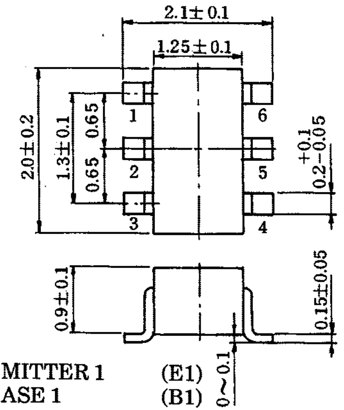
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

RN2910,RN2911

Switching, Inverter Circuit, Interface Circuit And Driver Circuit Applications

- Including two devices in US6 (ultra super mini type with 6 leads)
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN1910, RN1911

Unit in mm

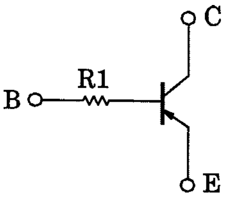


1. EMITTER 1 (E1)
2. BASE 1 (B1)
3. COLLECTOR 2 (C2)
4. EMITTER 2 (E2)
5. BASE 2 (B2)
6. COLLECTOR 1 (C1)

JEDEC	―
EIAJ	―
TOSHIBA	2-2J1A

Weight: 6.8mg

Equivalent Circuit

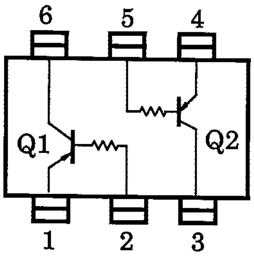


Maximum Ratings (Ta = 25°C) (Q1, Q2 Common)

Characterisstic	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

* : Total rating

Equivalent Circuit (Top View)



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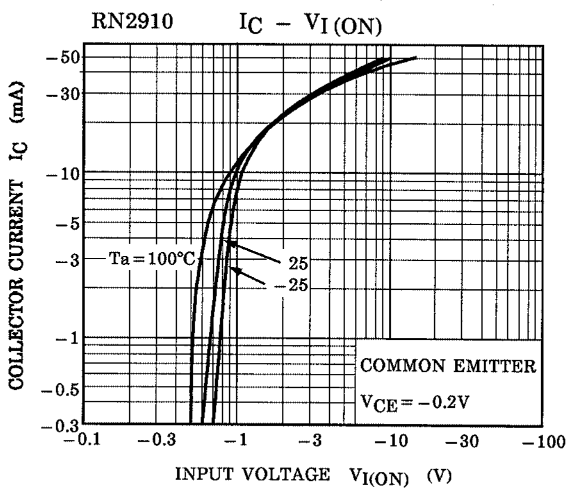
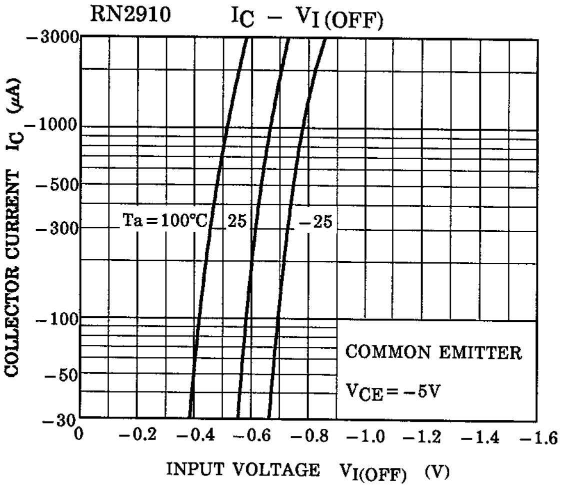
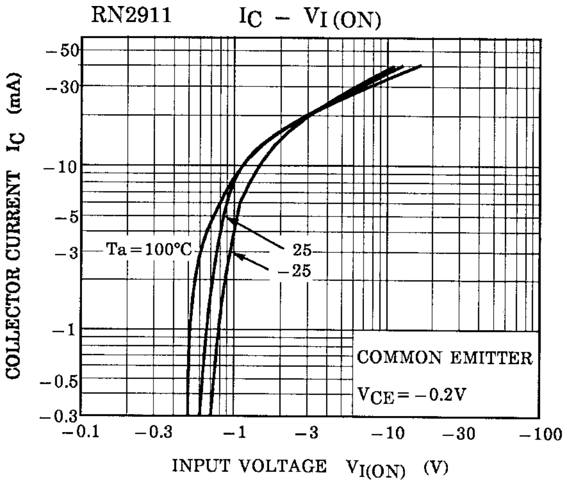
Electrical Characteristics (Ta = 25°C)

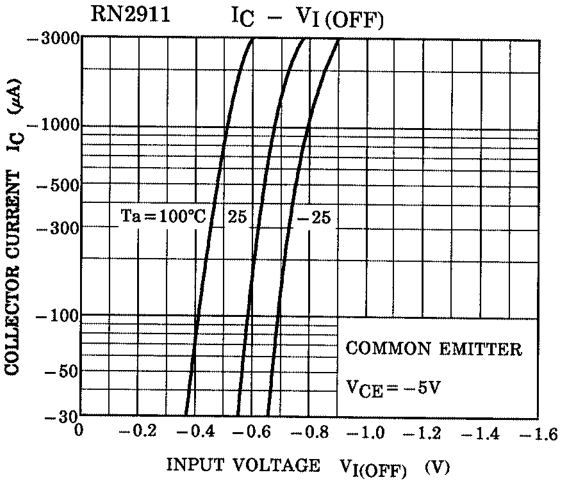
Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	—	V_{CB} = −50V, I_E = 0	—	—	−100	nA
Emitter cut-off current		I_{EBO}	—	V_{EB} = −5V, I_C = 0	—	—	−100	nA
DC current gain		h_{FE}	—	V_{CE} = −5V, I_C = −1mA	120	—	400	—
Collector-emitter saturation 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	—	200	—	MHz
Collector output capacitance		C_{ob}	—	V_{CB} = −10V, I_E = 0V, f = 1MHz	—	3	6	pF
Input resistor	RN2910	—	—	—	3.29	4.7	6.11	kΩ
	RN2911				7	10	13	

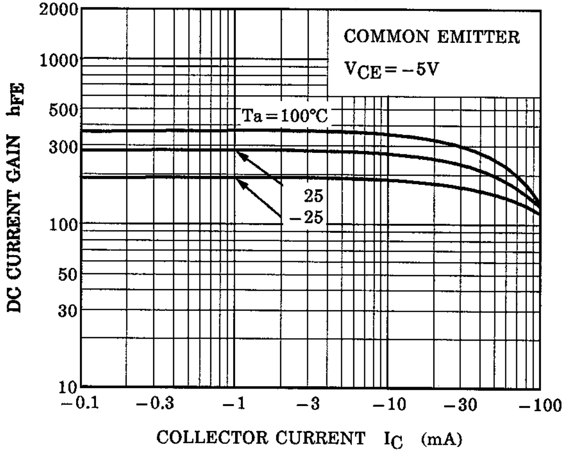
(Q1, Q2 Common)

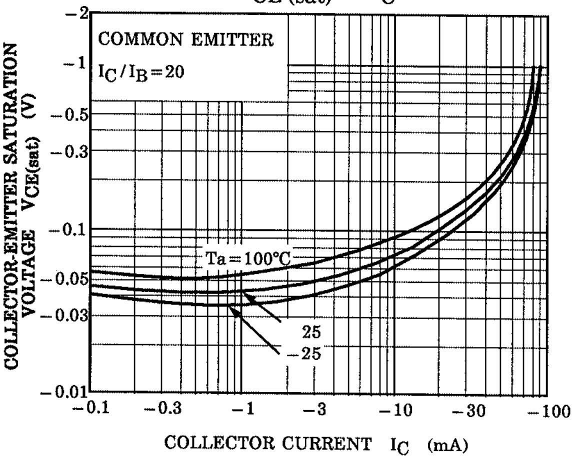

RN2910
I_C – $V_{I(ON)}$
COLLECTOR CURRENT I_C (mA)
−50
−30
−10
−5
−3
−1
−0.5
−0.3
−0.1
−0.3
−1
−3
−10
−30
−100
INPUT VOLTAGE $V_{I(ON)}$ (V)
Ta = 100°C
25
−25
COMMON EMITTER
V_{CE} = −0.2V

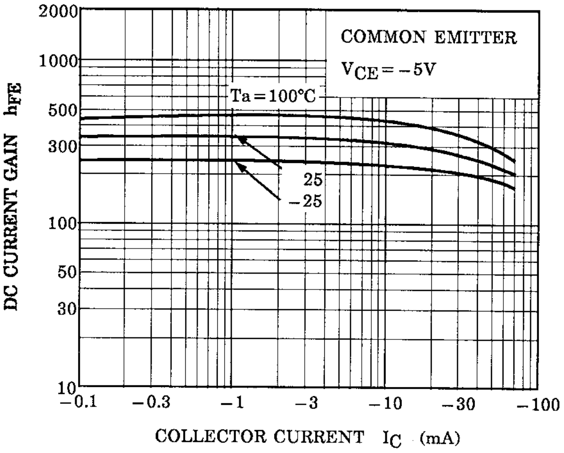

RN2910
I_C – $V_{I(OFF)}$
COLLECTOR CURRENT I_C (μA)
−3000
−1000
−500
−300
−100
−50
−30
0
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
−1.6
INPUT VOLTAGE $V_{I(OFF)}$ (V)
Ta = 100°C
25
−25
COMMON EMITTER
V_{CE} = −5V

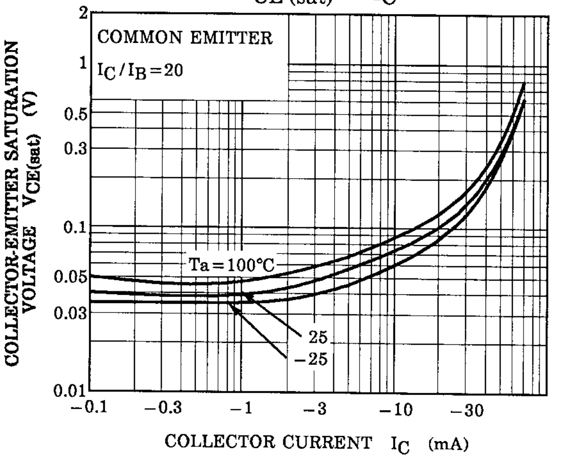

RN2911
I_C – $V_{I(ON)}$
COLLECTOR CURRENT I_C (mA)
−50
−30
−10
−5
−3
−1
−0.5
−0.3
−0.1
−0.3
−1
−3
−10
−30
−100
INPUT VOLTAGE $V_{I(ON)}$ (V)
Ta = 100°C
25
−25
COMMON EMITTER
V_{CE} = −0.2V

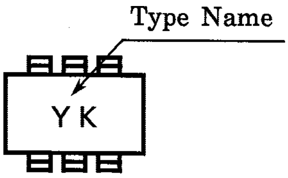

RN2911
I_C – $V_{I(OFF)}$
COLLECTOR CURRENT I_C (μA)
−3000
−1000
−500
−300
−100
−50
−30
0
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
−1.6
INPUT VOLTAGE $V_{I(OFF)}$ (V)
Ta = 100°C
25
−25
COMMON EMITTER
V_{CE} = −5V


RN2910 h_{FE} – I_C


RN2911 $V_{CE\,(sat)}$ – I_C


RN2911 h_{FE} – I_C


RN2911 $V_{CE\,(sat)}$ – I_C

Type Name	Marking
RN2910	
RN2911