TOSHIBA Transistor   Silicon PNP Epitaxial Type (PCT Process)
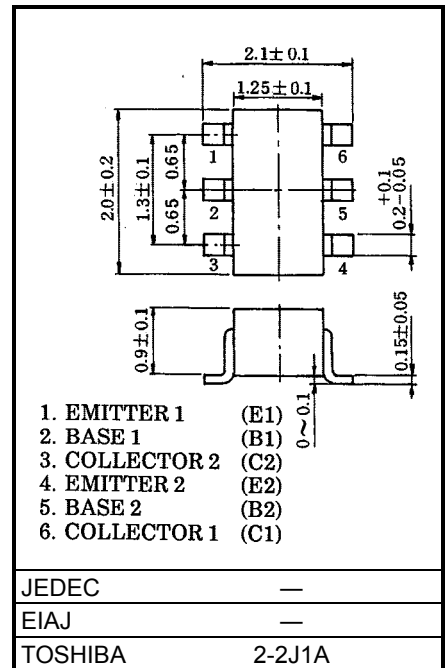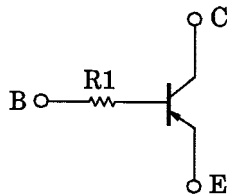
RN2910,RN2911

Switching, Inverter Circuit, Interface Circuit
And Driver Circuit Applications

Unit: mm

● 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

Equivalent Circuit

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

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

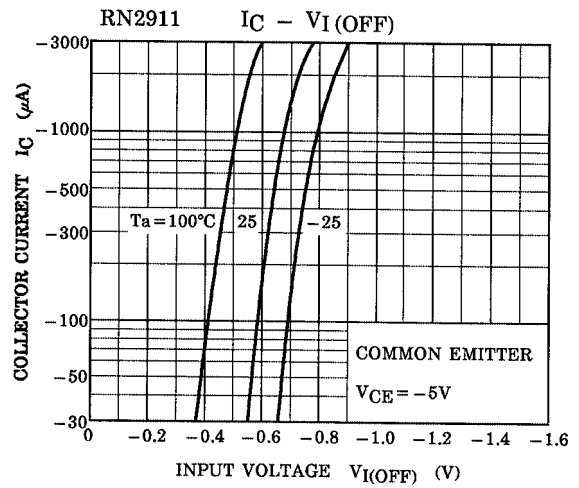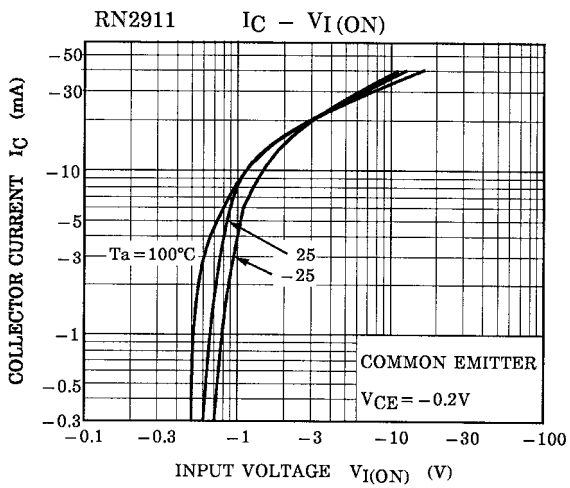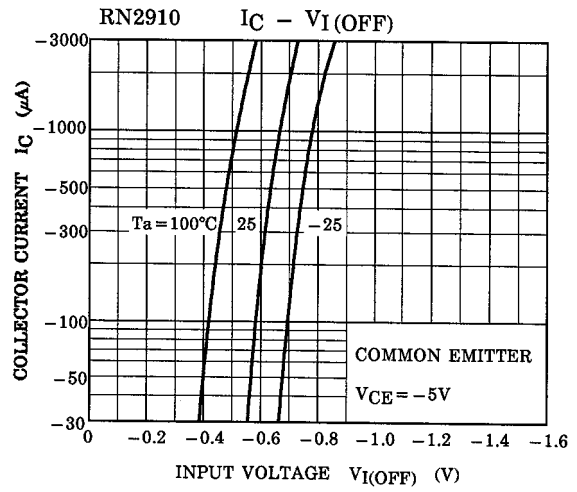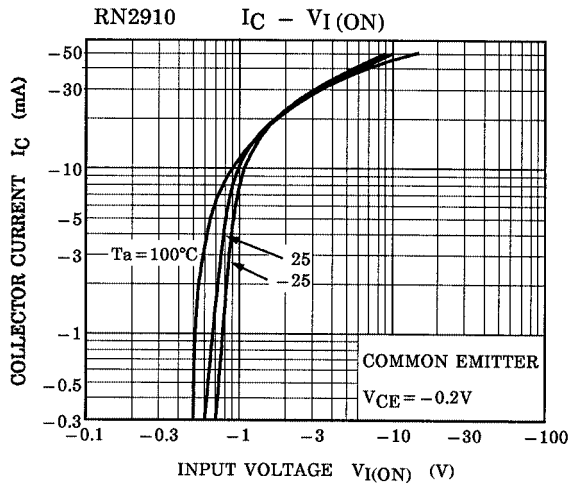| Characterisstic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	−50	V
Collector-emitter voltage	V_{CEO}	−50	V
Emitter-base voltage	V_{EBO}	−5	V
Collector current	I_C	−100	mA
Collector power dissipation	P_C*	200	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	−55~150	°C

* : Total rating

Equivalent Circuit (Top View)
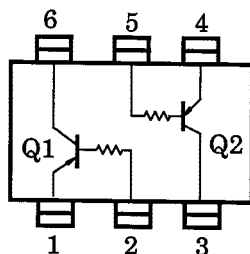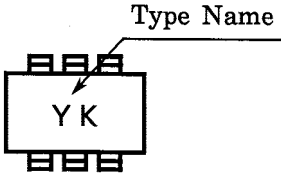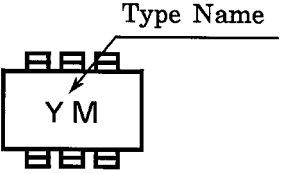
Electrical Characteristics (Ta = 25°C)

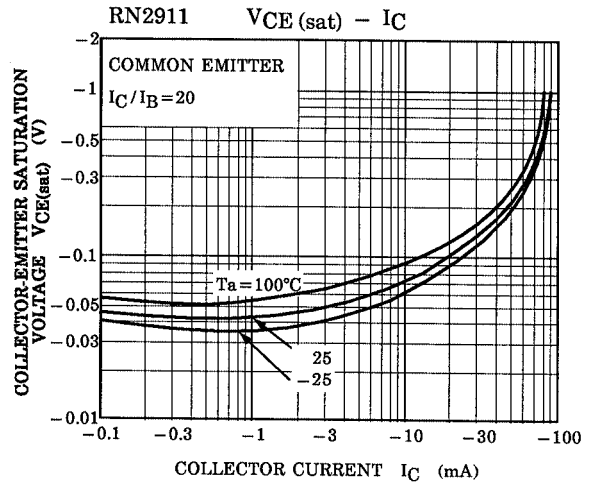| Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	—	$V_{CB} = -50V$, $I_E = 0$	—	—	−100	nA
Emitter cut-off current		I_{EBO}	—	$V_{EB} = -5V$, $I_C = 0$	—	—	−100	nA
DC current gain		h_{FE}	—	$V_{CE} = -5V$, $I_C = -1mA$	120	—	400	—
Collector-emitter 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)

Ta = 100°C
25
−25

COMMON EMITTER
$V_{CE} = -0.2V$

INPUT VOLTAGE $V_{I(ON)}$ (V)

RN2910 $I_C - V_I$(OFF)

COLLECTOR CURRENT I_C (μA)

Ta = 100°C 25 −25

COMMON EMITTER
$V_{CE} = -5V$

INPUT VOLTAGE $V_{I(OFF)}$ (V)

RN2911 $I_C - V_I$(ON)

COLLECTOR CURRENT I_C (mA)

Ta = 100°C
25
−25

COMMON EMITTER
$V_{CE} = -0.2V$

INPUT VOLTAGE $V_{I(ON)}$ (V)

RN2911 $I_C - V_I$(OFF)

COLLECTOR CURRENT I_C (μA)

Ta = 100°C 25 −25

COMMON EMITTER
$V_{CE} = -5V$

INPUT VOLTAGE $V_{I(OFF)}$ (V)

2001-06-07

RN2910   hFE − IC

COMMON EMITTER
$V_{CE} = -5V$

Ta = 100°C

25
−25

DC CURRENT GAIN hFE

COLLECTOR CURRENT IC (mA)

RN2911   VCE (sat) − IC

COMMON EMITTER
$I_C / I_B = 20$

Ta = 100°C

25
−25

COLLECTOR-EMITTER SATURATION VOLTAGE VCE(sat) (V)

COLLECTOR CURRENT IC (mA)

RN2911   hFE − IC

COMMON EMITTER
$V_{CE} = -5V$

Ta = 100°C

25
−25

DC CURRENT GAIN hFE

COLLECTOR CURRENT IC (mA)

RN2911   VCE (sat) − IC

COMMON EMITTER
$I_C / I_B = 20$

Ta = 100°C

25
−25

COLLECTOR-EMITTER SATURATION VOLTAGE VCE(sat) (V)

COLLECTOR CURRENT IC (mA)

2001-06-07

Type Name	Marking
RN2910	
RN2911	

RESTRICTIONS ON PRODUCT USE

000707EAA