TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

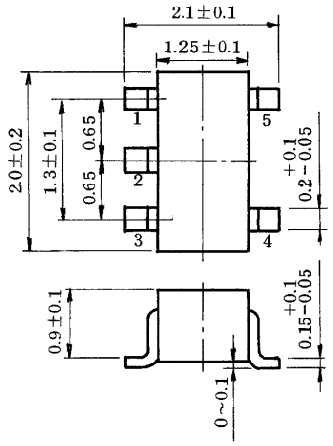
RN1710, RN1711

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT

AND DRIVER CIRCUIT APPLICATIONS.

- Including Two Devices in USV (Ultra Super Mini Type with 5 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN2710~RN2711

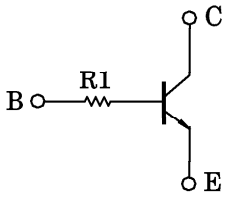
Unit in mm



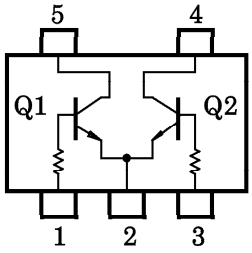
1. BASE 1	(B1)
2. EMITTER	(E)
3. BASE 2	(B2)
4. COLLECTOR 2	(C2)
5. COLLECTOR 1	(C1)
JEDEC	—
EIAJ	—
TOSHIBA	2-2L1A

Weight : 6.2mg

EQUIVALENT CIRCUIT



EQIVALENT CIRCUIT (TOP VIEW)



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}	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

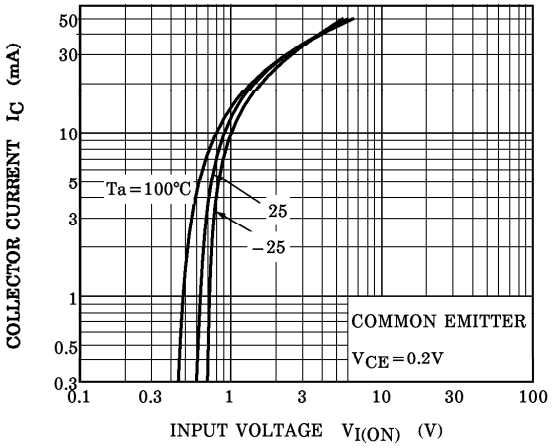
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB} = 50V, I_E = 0	—	—	100	nA
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	—	250	—	MHz
Collector Output Capacitance		C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	3	6	pF
Input Resistor	RN1710	R1		3.29	4.7	6.11	kΩ
	RN1711			7	10	13	

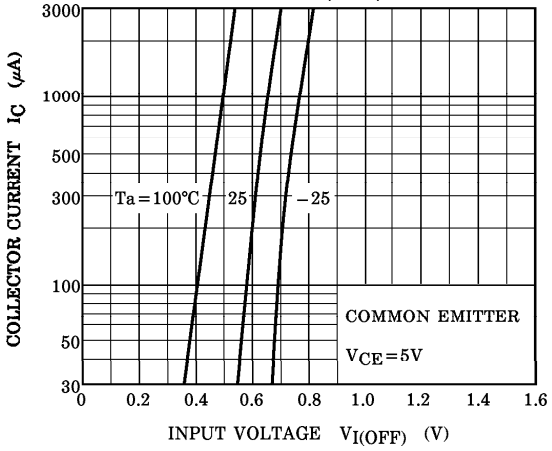
961001EAA2

(Q1, Q2 COMMON)

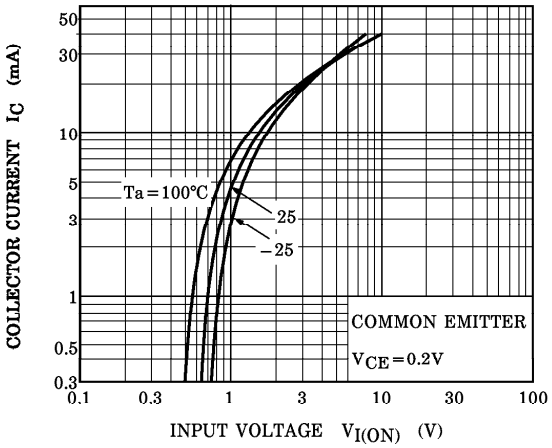
RN1710 I_C – $V_{I(ON)}$



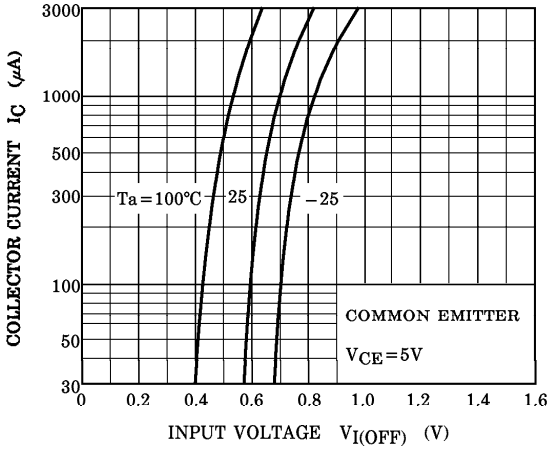
RN1710 I_C – $V_{I(OFF)}$



RN1711 I_C – $V_{I(ON)}$

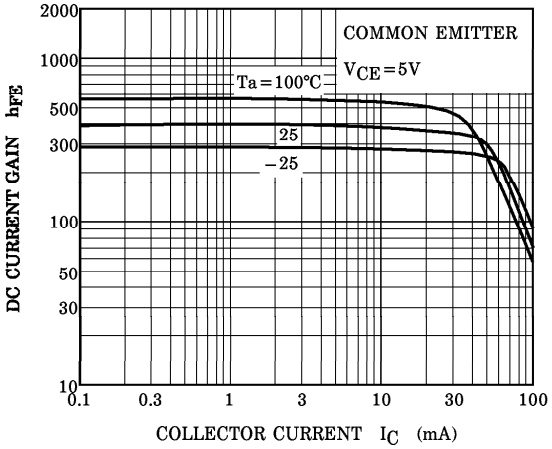


RN1711 I_C – $V_{I(OFF)}$

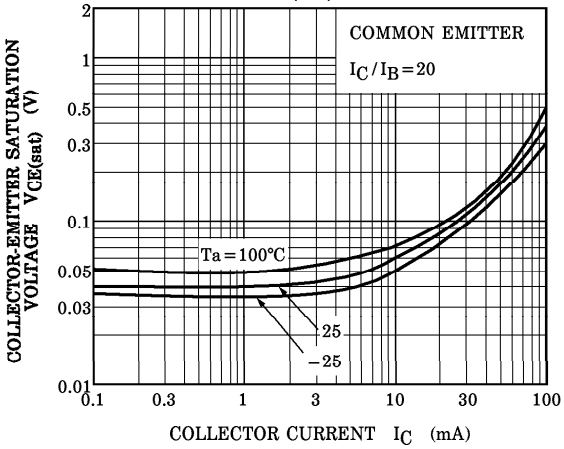


(Q1, Q2 COMMON)

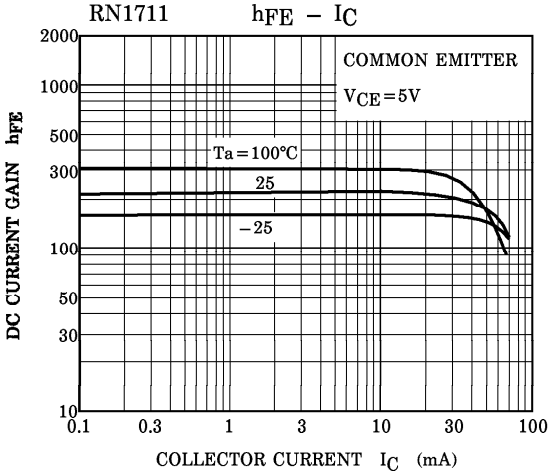
RN1710 h_{FE} – I_C



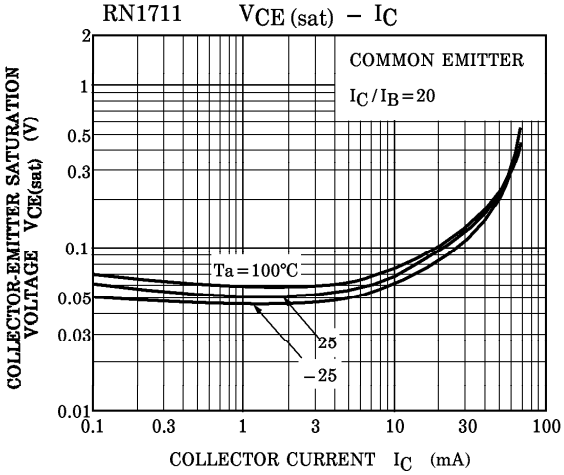
RN1710 $V_{CE\,(sat)}$ – I_C

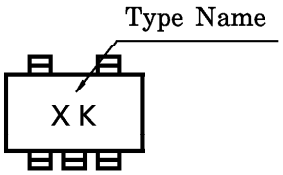


RN1711 h_{FE} – I_C



RN1711 $V_{CE\,(sat)}$ – I_C



TYPE NAME	MARKING
RN1710	
RN1711