SILICON PNP EPITAXIAL TYPE

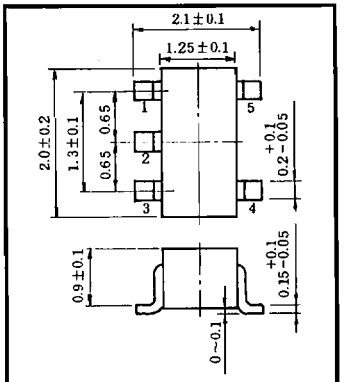
RN2701~RN2706

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 RN1701~RN1706

Unit in mm

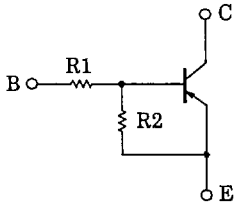


1. BASE 1 (B1)
2. EMITTER (E)
3. BASE 2 (B2)
4. COLLECTOR 2 (C2)
5. COLLECTOR 1 (C1)

JEDEC	—
EIAJ	—
TOSHIBA	2-2L1A

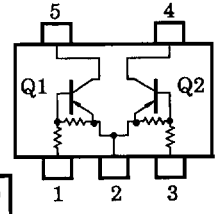
Weight : 6.2mg

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2701	4.7	4.7
RN2702	10	10
RN2703	22	22
RN2704	47	47
RN2705	2.2	47
RN2706	4.7	47

EQIVALENT CIRCUIT (TOP VIEW)



MAXIMUM RATINGS (Ta = 25°C) (Q1, Q2 COMMON)

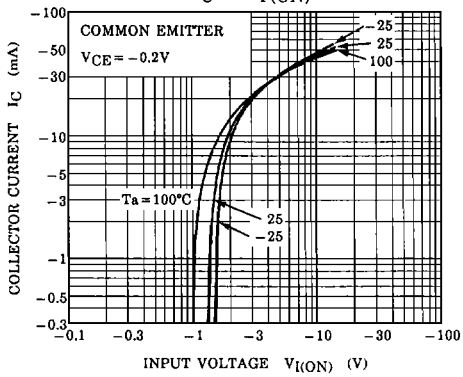
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN2701~2706	V_{CBO}	−50	V
Collector-Emitter Voltage		V_{CEO}	−50	V
Emitter-Base Voltage	RN2701~2704	V_{EBO}	−10	V
	RN2705, 2706		−5	
Collector Current	RN2701~2706	I_C	−100	mA
Collector Power Dissipation		P_C *	200	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

* : Total Rating

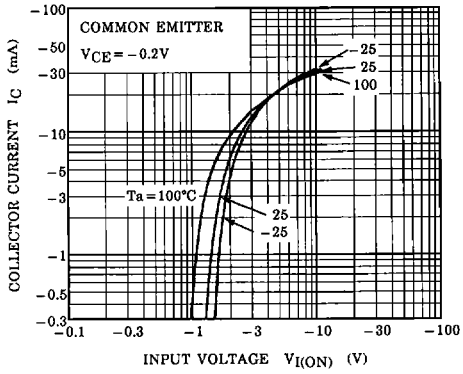
ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2701~2706	I_{CBO}	$V_{CB} = -50V$, $I_E = 0$	—	—	−100	nA
		I_{CEO}	$V_{CE} = -50V$, $I_B = 0$	—	—	−500	
Emitter Cut-off Current	RN2701	I_{EBO}	$V_{EB} = -10V$, $I_C = 0$	−0.82	—	−1.52	mA
	RN2702			−0.38	—	−0.71	
	RN2703			−0.17	—	−0.33	
	RN2704			−0.082	—	−0.15	
	RN2705		$V_{EB} = -5V$, $I_C = 0$	−0.078	—	−0.145	
	RN2706			−0.074	—	−0.138	
DC Current Gain	RN2701	h_{FE}	$V_{CE} = -5V$, $I_C = -10mA$	30	—	—	
	RN2702			50	—	—	
	RN2703			70	—	—	
	RN2704			80	—	—	
	RN2705			80	—	—	
	RN2706			80	—	—	
Collector-Emitter Saturation Voltage	RN2701~2706	$V_{CE\ (sat)}$	$I_C = -5mA$, $I_B = -0.25mA$	—	−0.1	−0.3	V
Input Voltage (ON)	RN2701	$V_{I\ (ON)}$	$V_{CE} = -0.2V$, $I_C = -5mA$	−1.1	—	−2.0	V
	RN2702			−1.2	—	−2.4	
	RN2703			−1.3	—	−3.0	
	RN2704			−1.5	—	−5.0	
	RN2705			−0.6	—	−1.1	
	RN2706			−0.7	—	−1.3	
Input Voltage (OFF)	RN2701~2704	$V_{I\ (OFF)}$	$V_{CE} = -5V$, $I_C = -0.1mA$	−1.0	—	−1.5	V
	RN2705, 2706			−0.5	—	−0.8	
Transition Frequency	RN2701~2706	f_T	$V_{CE} = -10V$, $I_C = -5mA$	—	200	—	MHz
Collector Output Capacitance	RN2701~2706	C_{ob}	$V_{CB} = -10V$, $I_E = 0$, $f = 1MHz$	—	3	6	pF
Input Resistor	RN2701	R1		3.29	4.7	6.11	kΩ
	RN2702			7	10	13	
	RN2703			15.4	22	28.6	
	RN2704			32.9	47	61.1	
	RN2705			1.54	2.2	2.86	
	RN2706			3.29	4.7	6.11	
Resistor Ratio	RN2701~2704	R1 / R2		0.9	1.0	1.1	
	RN2705			0.0421	0.0468	0.0515	
	RN2706			0.09	0.1	0.11	

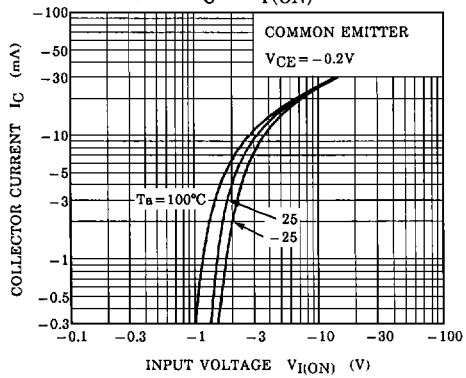
RN2701 $I_C - V_{I(ON)}$



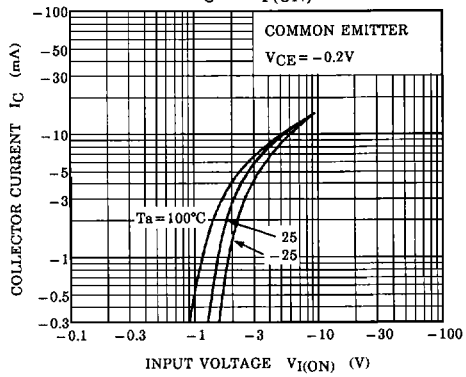
RN2702 $I_C - V_{I(ON)}$



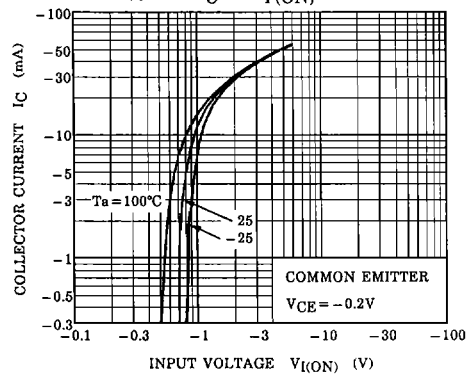
RN2703 $I_C - V_{I(ON)}$



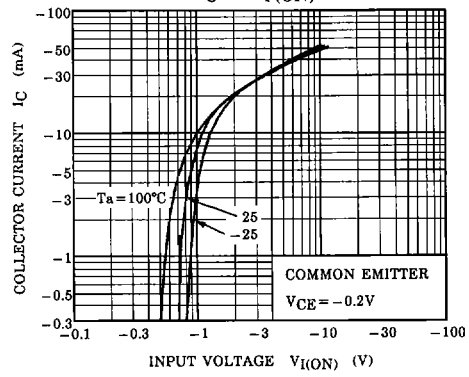
RN2704 $I_C - V_{I(ON)}$



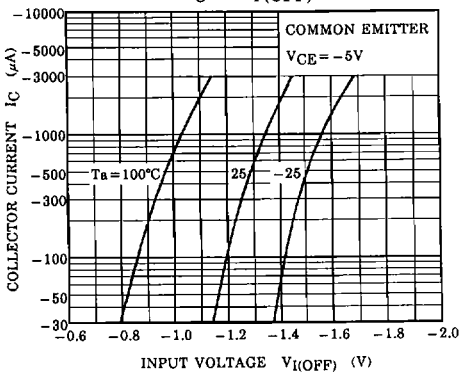
RN2705 $I_C - V_{I(ON)}$



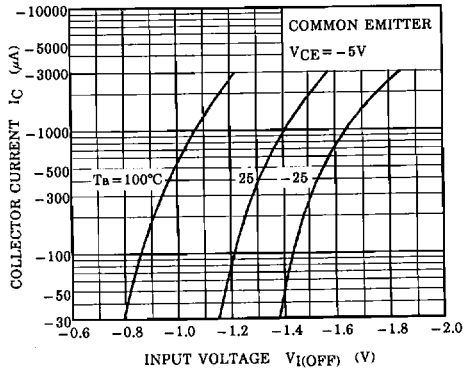
RN2706 $I_C - V_{I(ON)}$



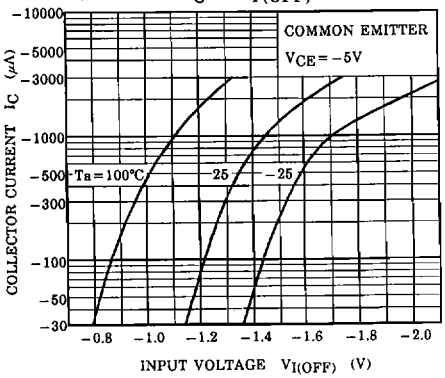
RN2701 $I_C - V_{I(OFF)}$



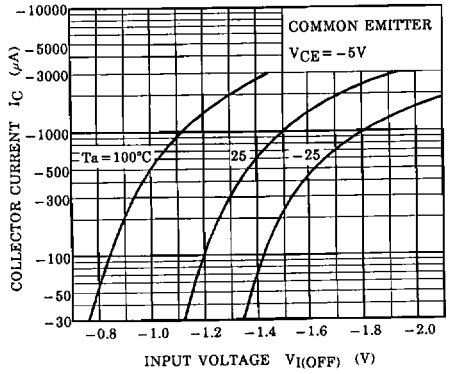
RN2702 $I_C - V_{I(OFF)}$



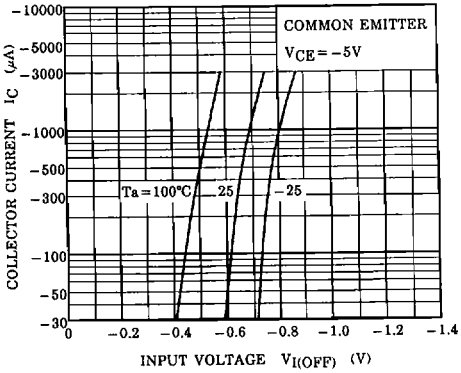
RN2703 $I_C - V_{I(OFF)}$



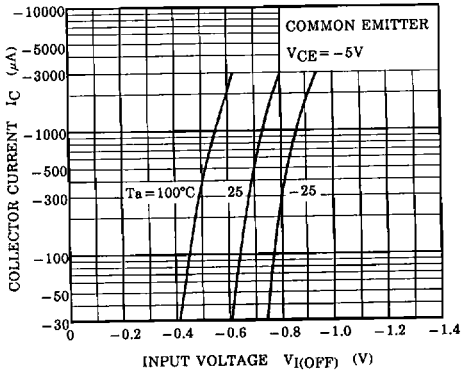
RN2704 $I_C - V_{I(OFF)}$



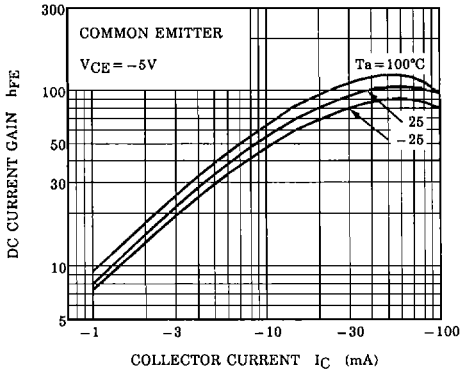
RN2705 $I_C - V_{I(OFF)}$



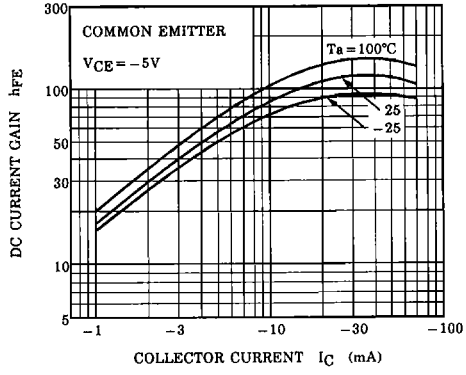
RN2706 $I_C - V_{I(OFF)}$



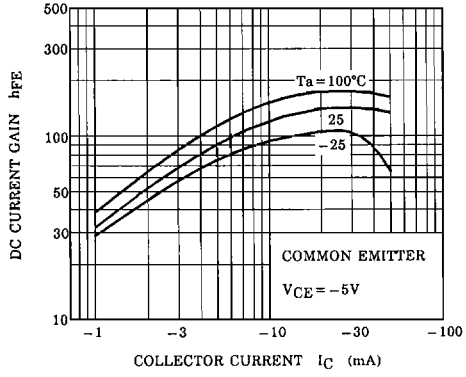
RN2701 h_{FE} – I_C



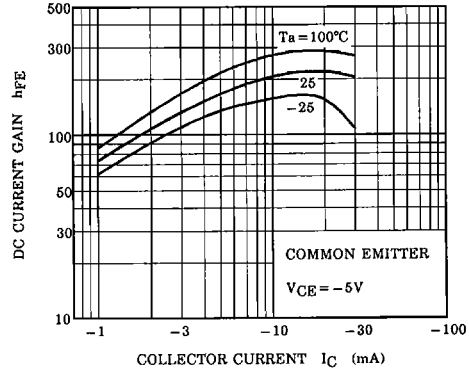
RN2702 h_{FE} – I_C



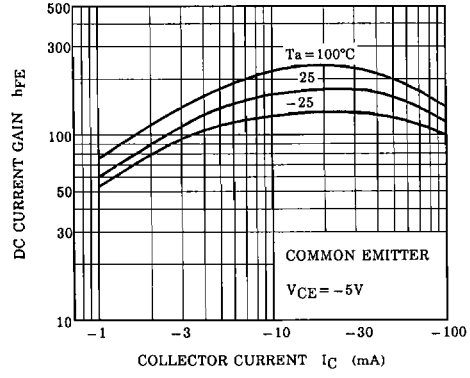
RN2703 h_{FE} – I_C



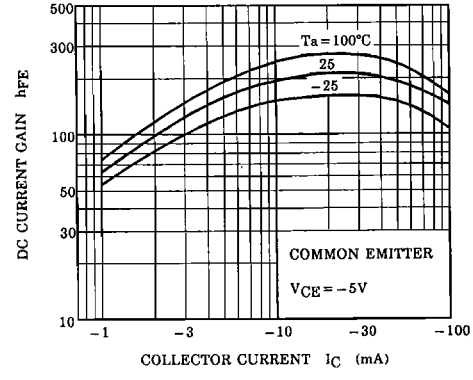
RN2704 h_{FE} – I_C

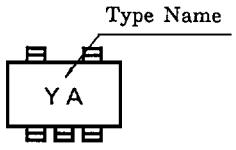
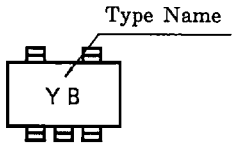
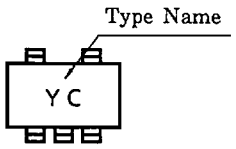
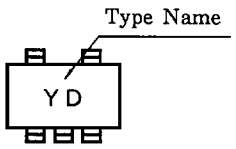
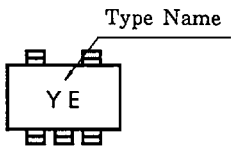


RN2705 h_{FE} – I_C



RN2706 h_{FE} – I_C



TYPE NAME	MARKING
RN2701	
RN2702	
RN2703	
RN2704	
RN2705	
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