

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

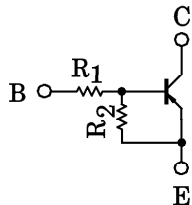
RN2414, RN2415, RN2416, RN2417, RN2418

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS.

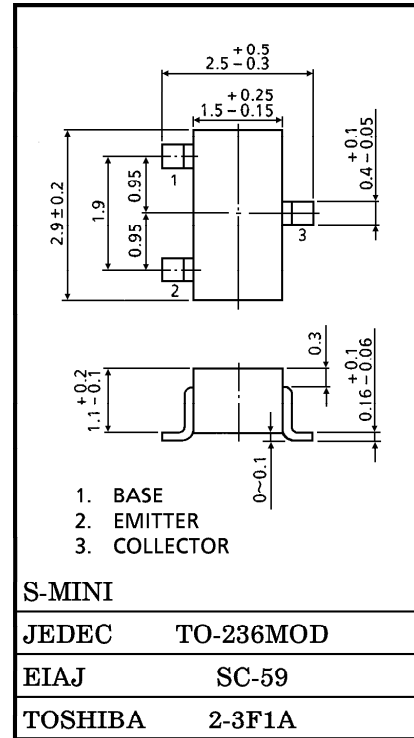
Unit in mm

- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1414~RN1418

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R ₁ (kΩ)	R ₂ (kΩ)
RN2414	1	10
RN2415	2.2	10
RN2416	4.7	10
RN2417	10	4.7
RN2418	47	10



Weight : 0.012g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN2414~2418	V _{CB0}	-50	V
Collector-Emitter Voltage		V _{CE0}	-50	V
Emitter-Base Voltage	RN2414	V _{EB0}	-5	V
	RN2415		-6	
	RN2416		-7	
	RN2417		-15	
	RN2418		-25	
Collector Current	RN2414~2418	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

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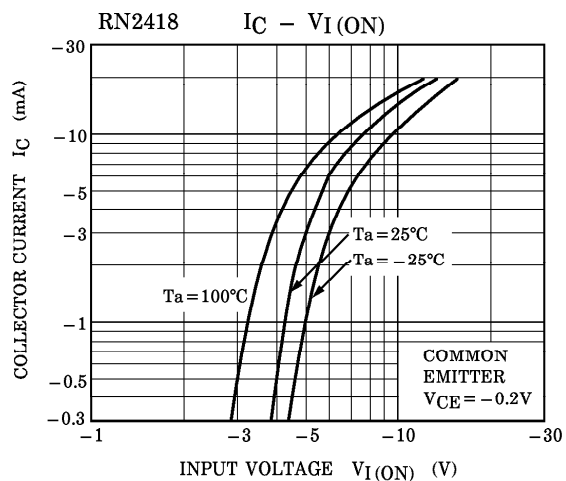
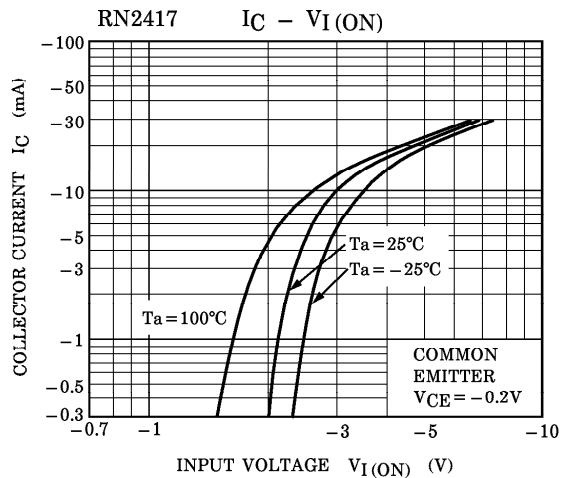
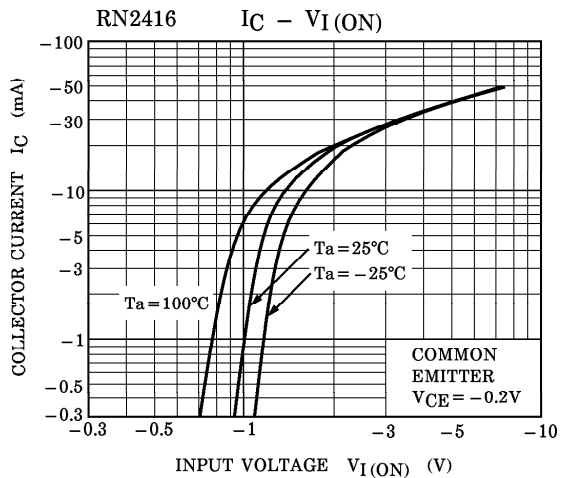
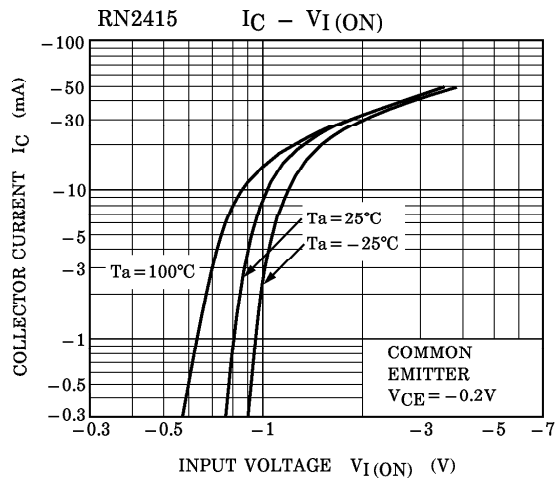
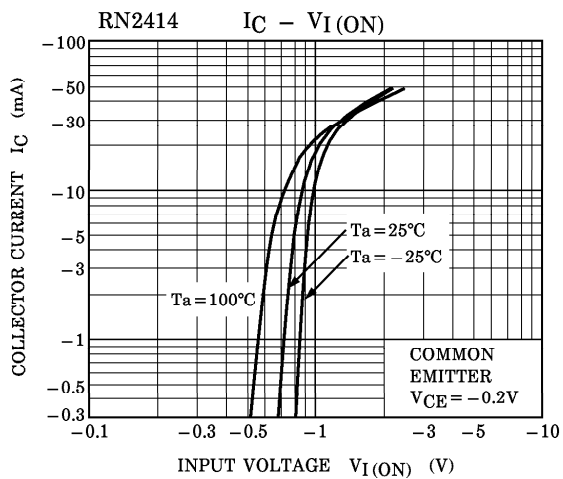
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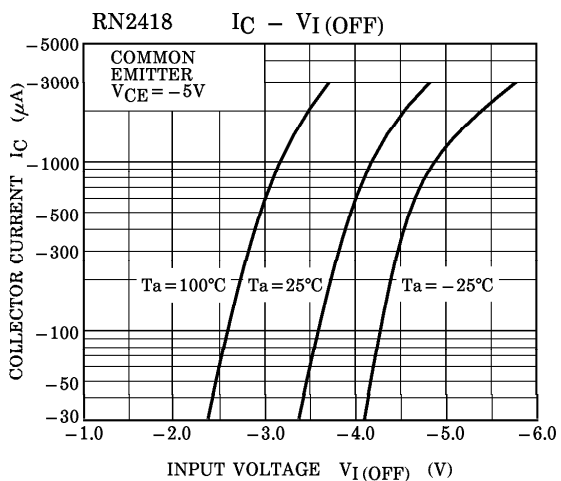
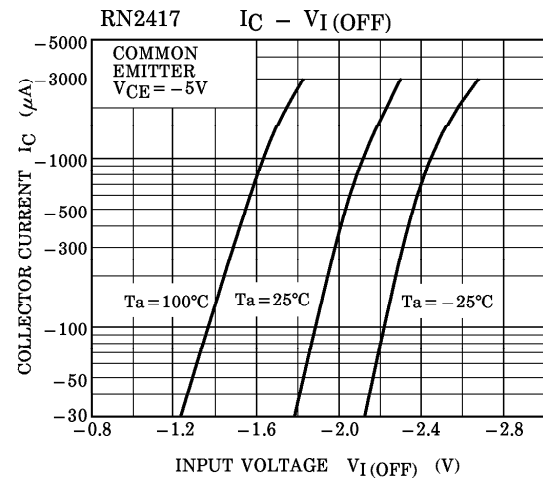
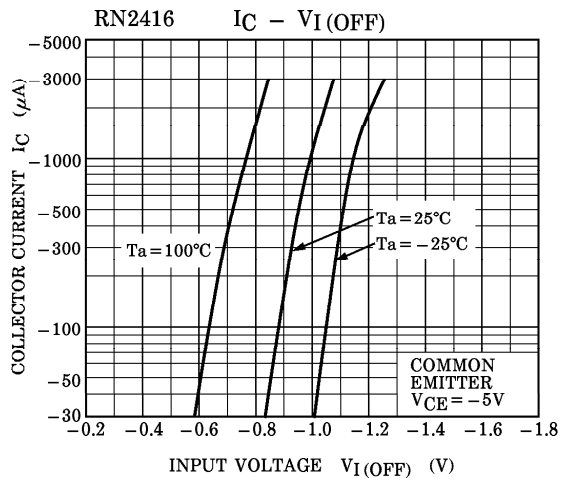
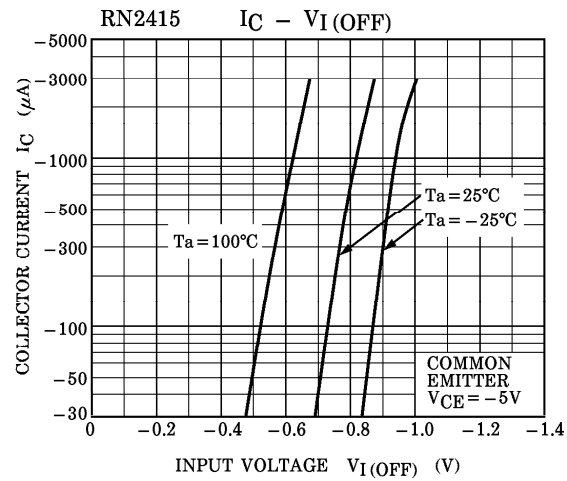
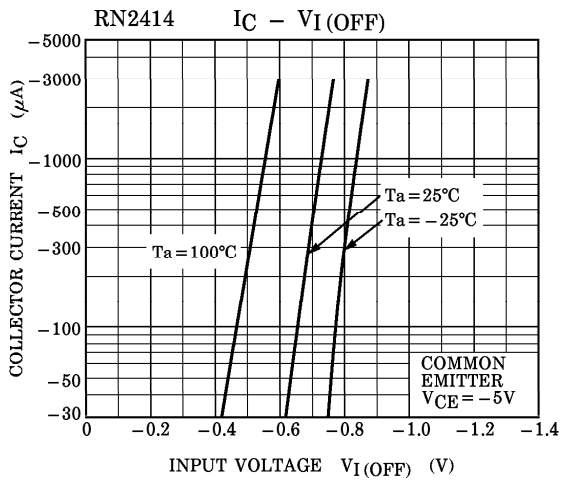
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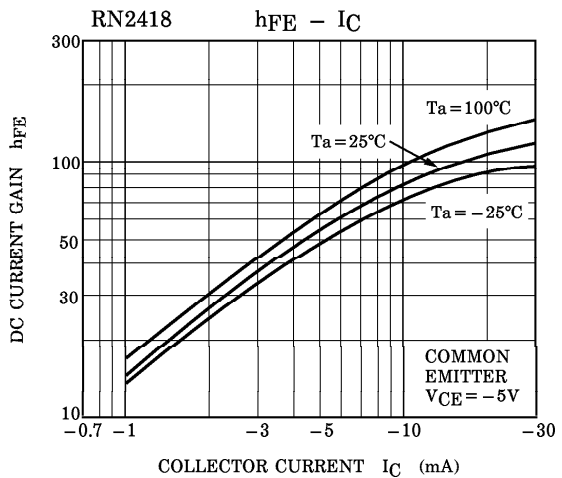
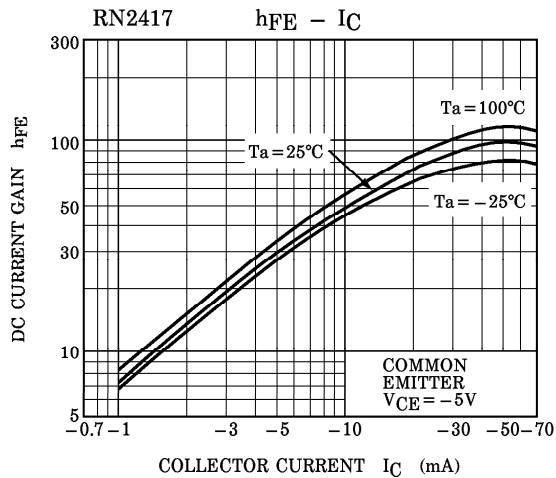
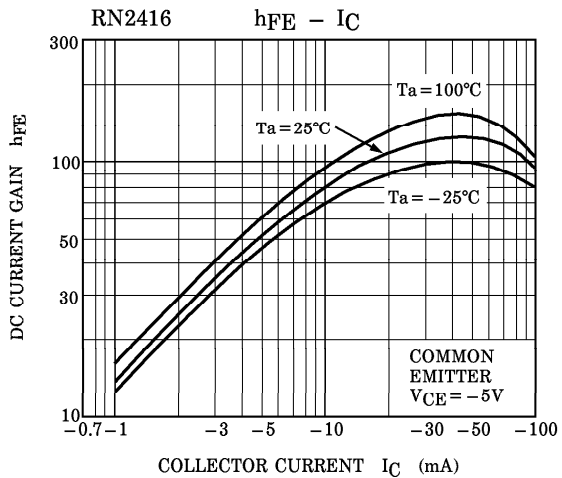
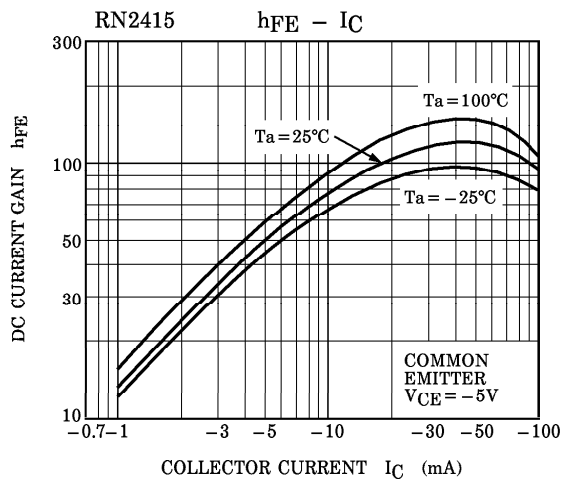
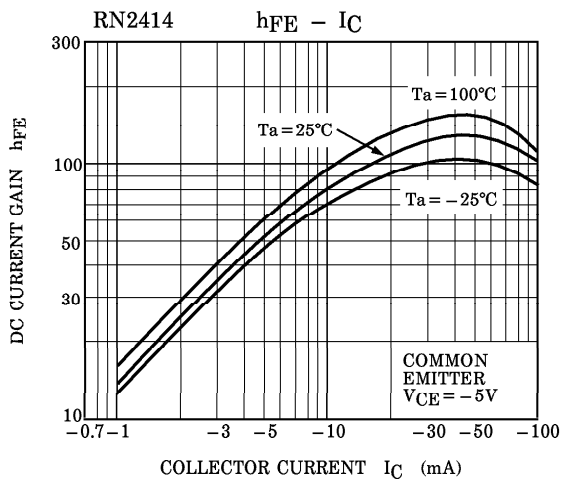
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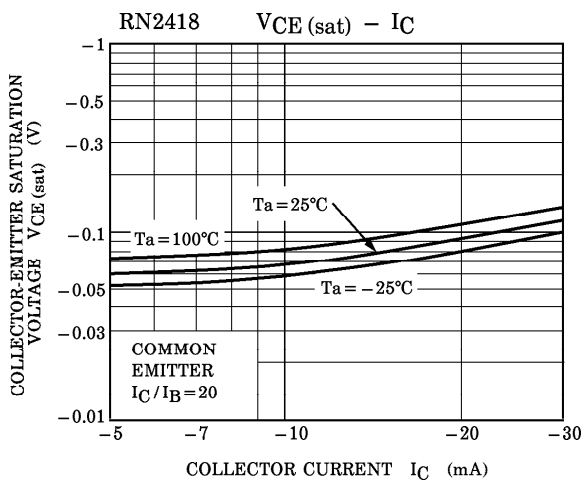
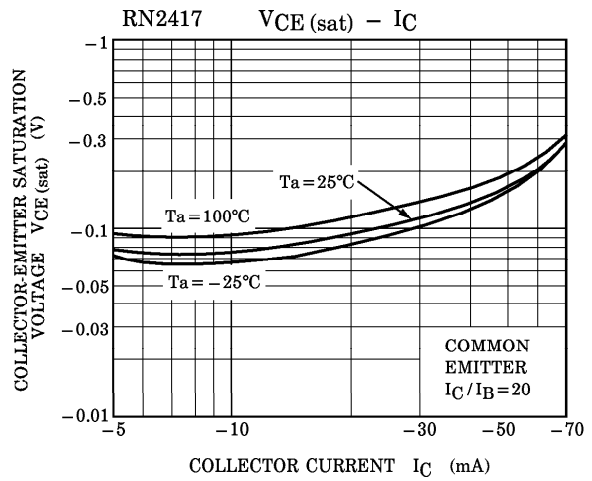
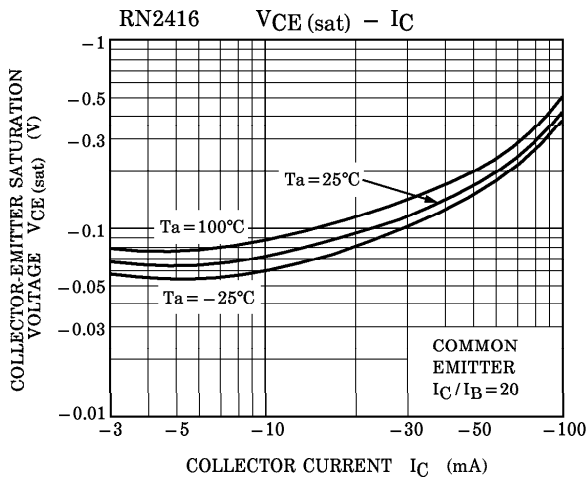
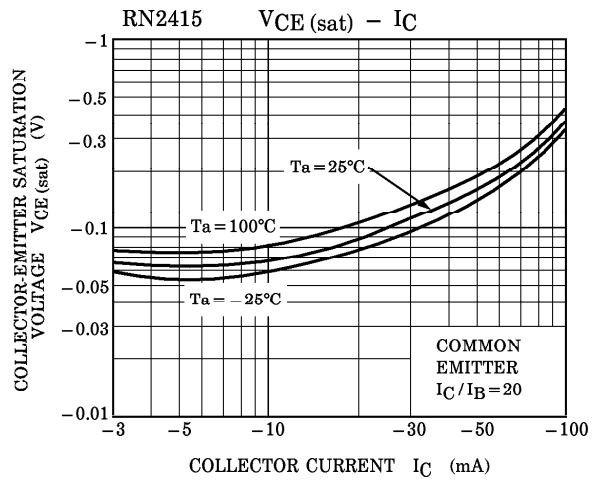
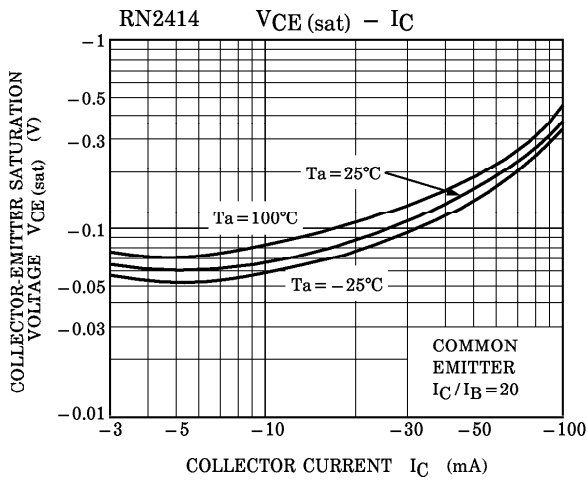
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

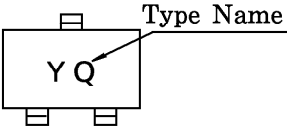
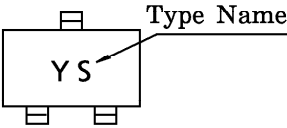
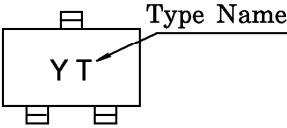
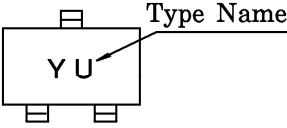
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2414~2418	I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-100	nA
	RN2414~2418	I_{CEO}	$V_{CE} = -50V, I_B = 0$	—	—	-500	nA
Emitter Cut-off Current	RN2414	I_{EBO}	$V_{EB} = -5V, I_C = 0$	-0.35	—	-0.65	mA
	RN2415		$V_{EB} = -6V, I_C = 0$	-0.37	—	-0.71	
	RN2416		$V_{EB} = -7V, I_C = 0$	-0.36	—	-0.68	
	RN2417		$V_{EB} = -15V, I_C = 0$	-0.78	—	-1.46	
	RN2418		$V_{EB} = -25V, I_C = 0$	-0.33	—	-0.63	
DC Current Gain	RN2414~16, 18	h_{FE}	$V_{CE} = -5V, I_C = -10mA$	50	—	—	
	RN2417			30	—	—	
Collector-Emitter Saturation Voltage	RN2414~2418	$V_{CE(sat)}$	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V
Input Voltage (ON)	RN2414	$V_{I(ON)}$	$V_{CE} = -0.2V, I_C = -5mA$	-0.5	—	-2.0	V
	RN2415			-0.6	—	-2.5	
	RN2416			-0.7	—	-2.5	
	RN2417			-1.5	—	-3.5	
	RN2418			-2.5	—	-10.0	
Input Voltage (OFF)	RN2414	$V_{I(OFF)}$	$V_{CE} = -5V, I_C = -0.1mA$	-0.3	—	-0.9	V
	RN2415			-0.3	—	-1.0	
	RN2416			-0.3	—	-1.1	
	RN2417			-0.3	—	-3.0	
	RN2418			-0.5	—	-5.7	
Transition Frequency	RN2414~2418	f_T	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector Output Capacitance	RN2414~2418	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3.0	6.0	pF
Input Resistor	RN2414	R_1	—	0.7	1.0	1.3	kΩ
	RN2415			1.54	2.2	2.86	
	RN2416			3.29	4.7	6.11	
	RN2417			7.0	10.0	13.0	
	RN2418			32.9	47.0	61.1	
Resistor Ratio	RN2414	R_1 / R_2	—	—	0.1	—	
	RN2415			—	0.22	—	
	RN2416			—	0.47	—	
	RN2417			—	2.13	—	
	RN2418			—	4.7	—	









TYPE NAME	MARKING
RN2414	
RN2415	
RN2416	
RN2417	
RN2418	