

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

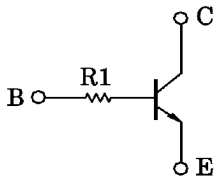
RN1312, RN1313

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

Unit in mm

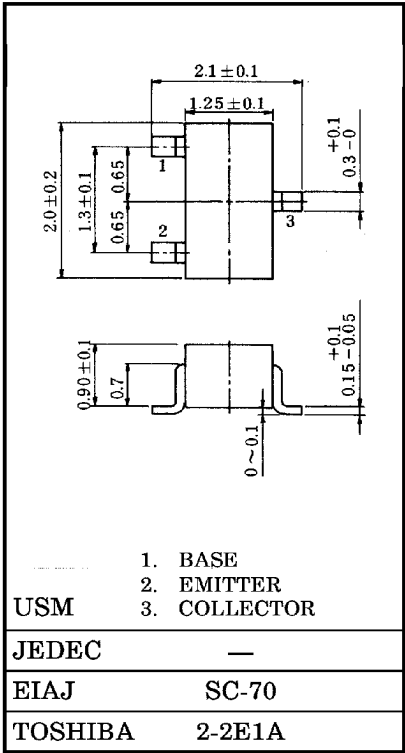
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN2312, RN2313

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	100	mA
Collector Power Dissipation	P _C	100	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

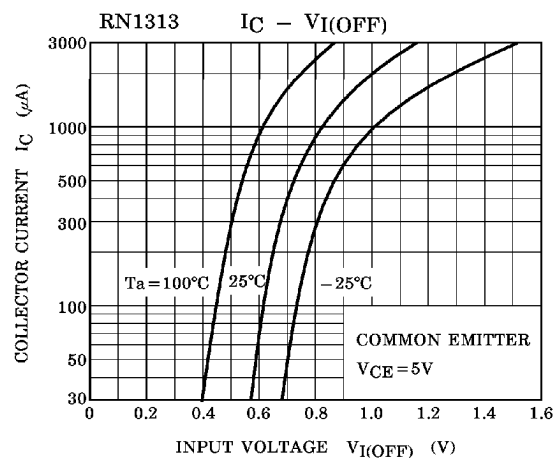
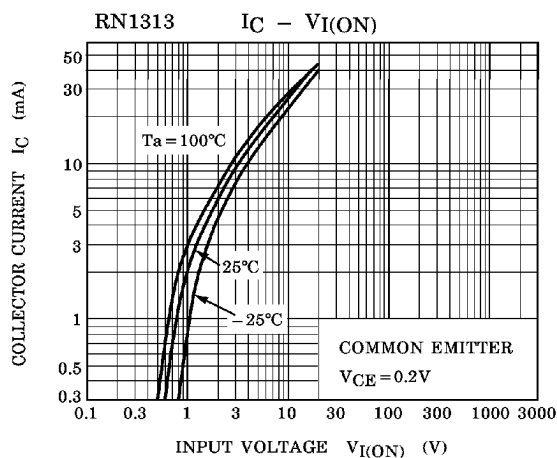
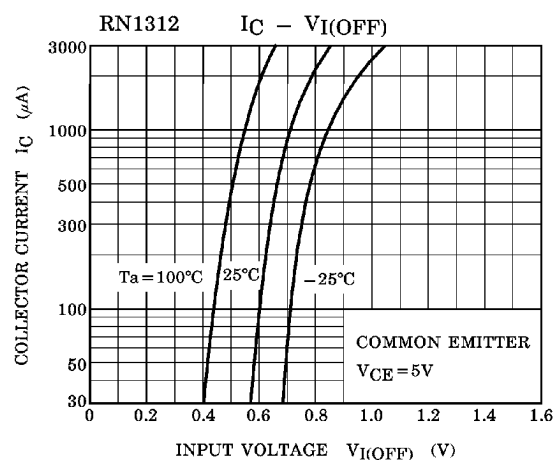
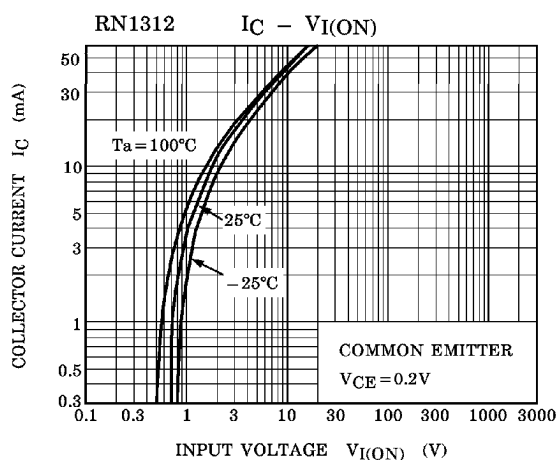


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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 Resistance	RN1312	R1	—	15.4	22	28.6	kΩ
	RN1313			32.9	47	61.1	

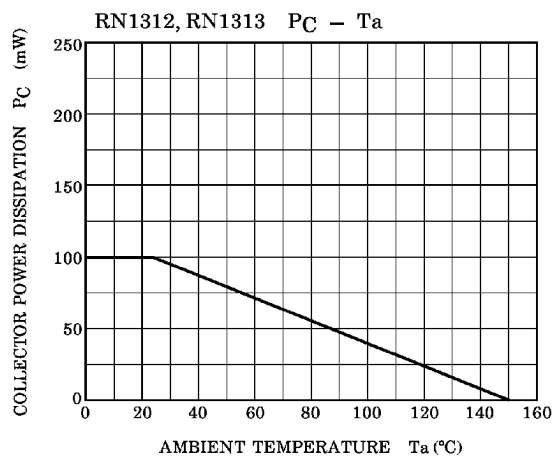
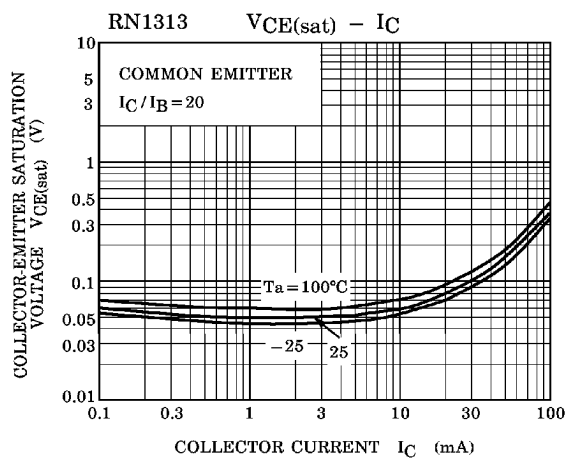
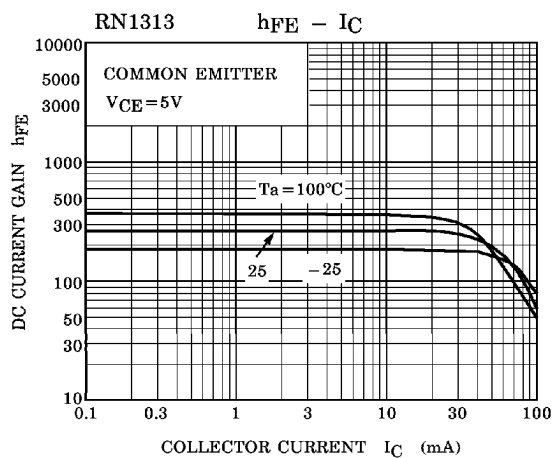
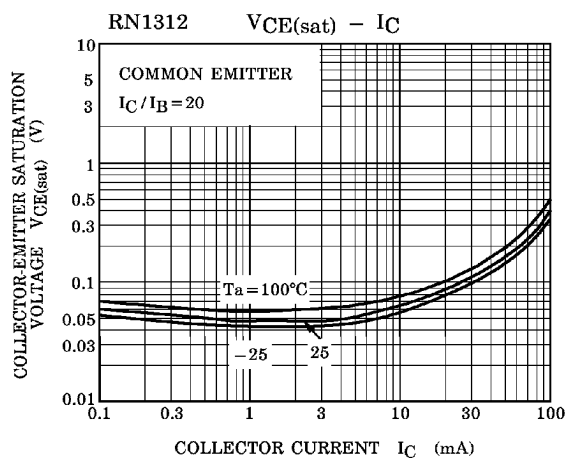
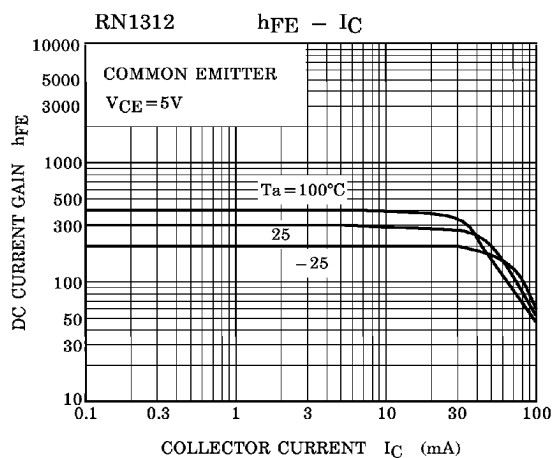
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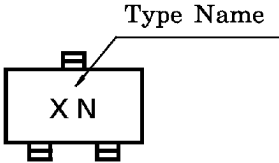
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TYPE NAME	MARKING
RN1312	
RN1313	