Unit: mm

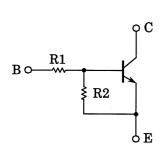
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

RN1201,RN1202,RN1203,RN1204,RN1205,RN1206

Switching, Inverter Circuit, Interface Circuit And Driver Circuit Applications

- With built-in bias resistors.
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary to RN2201~2206

Equivalent Circuit and Bias Resistor Values



Type No.	R1 (kΩ)	R2 (kΩ)
RN1201	4.7	4.7
RN1202	10	10
RN1203	22	22
RN1204	47	47
RN1205	2.2	47
RN1206	4.7	47

1. EMITTER 2. COLLECTOR 3. BASE JEDEC EIAJ TOSHIBA 2-4E1A

Weight: 0.13g

Maximum Ratings (Ta = 25°C)

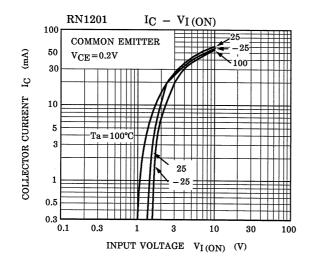
Characteristic		Symbol	Rating	Unit	
Collector-base voltage	RN1201~1206	V _{CBO}	50	V	
Collector-emitter voltage	1417201-1200	V _{CEO}	50	٧	
Emitter-base voltage	RN1201~1204	V _{EBO}	10	V	
	RN1205, 1206	vEBO.	5		
Collector current		I _c	100	mA	
Collector power dissipation	RN1201~1206	Pc	300	mW	
Junction temperature	KN1201**1200	Tj	150	°C	
Storage temperature range		T _{stg}	-55~150	°C	

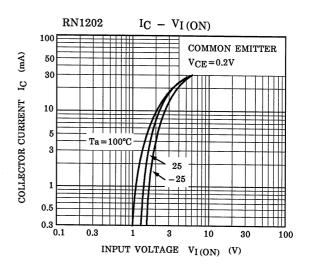


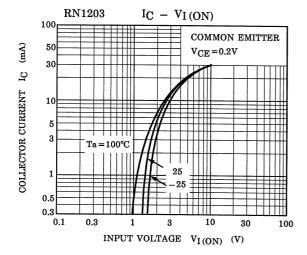
Electrical Characteristics (Ta = 25°C)

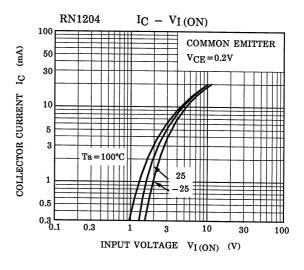
Characteris	stic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	RN1201~1206	I _{CBO}	_	V _{CB} = 50V, I _E = 0	_	_	100	nA
		I _{CEO}	_	V _{CE} = 50V, I _B = 0	_	_	500	nA
Emitter cut-off current	RN1201	l _{EBO}	_	V _{EB} = 10V, I _C = 0	0.82	_	1.52	- mA
	RN1202		_		0.38	_	0.71	
	RN1203		_		0.17	_	0.33	
	RN1204		_		0.082	_	0.15	
	RN1205		_	V _{EB} = 5V, I _C = 0	0.078	_	0.145	
	RN1206		_		0.074	_	0.138	
DC current gain	RN1201		_		30	_	_	
	RN1202		_		50	_	_	
	RN1203	h _{FE}	_	-	70	_	_	
	RN1204		_	V_{CE} = 5V, I_{C} = 10mA	80	_	_	
	RN1205		_		80	_	_	
	RN1206	-	_	1	80	_	_	
Collector-emitter saturation voltage	RN1201~1206	V _{CE (sat)}	_	I _C = 5mA, I _B = 0.25mA	_	0.1	0.3	V
Input voltage (ON)	RN1201	V _I (ON)	_	V _{CE} = 0.2V, I _C = 5mA	1.1	_	2.0	. V
	RN1202		_		1.2	_	2.4	
	RN1203		_		1.3	_	3.0	
	RN1204		_		1.5	_	5.0	
	RN1205		_		0.6	_	1.1	
	RN1206		_		0.7	_	1.3	
Input voltage (OFF)	RN1201~1204	V _{I (OFF)}	_	V _{CE} = 5V, I _C = 0.1mA	1.0	_	1.5	V
	RN1205~1206		_		0.5	_	0.8	
Translation frequency	RN1201~1206	f _T	_	V _{CE} =10V, I _C = 5mA	_	250	_	MHz
Collector output capacitance	RN1201~1206	C _{ob}	_	V _{CB} = 10V, I _E = 0, f = 1MHz	_	3	6	pF
Input Resistor	RN1201	R1	_		3.29	4.7	6.11	- kΩ
	RN1202		_		7	10	13	
	RN1203		_		15.4	22	28.6	
	RN1204		_		32.9	47	61.1	
	RN1205		_		1.54	2.2	2.86	
	RN1206		_		3.29	4.7	6.11	
Resistor Ratio	RN1201~1205	R1/R2	_	_	0.9	1.0	1.1	_
	RN1205		_		0.0421	0.0468	0.0515	
	RN1206		_		0.09	0.1	0.11	

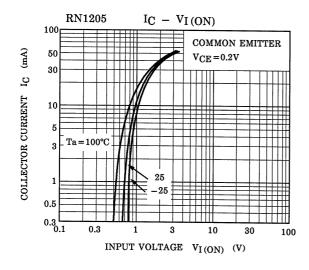
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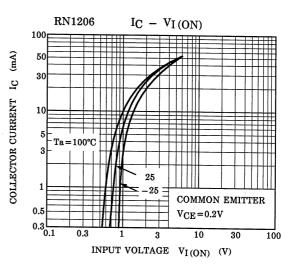




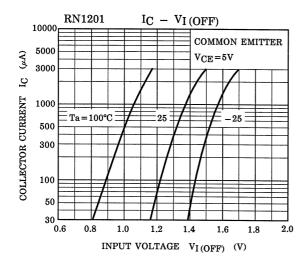


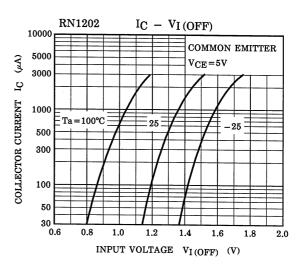


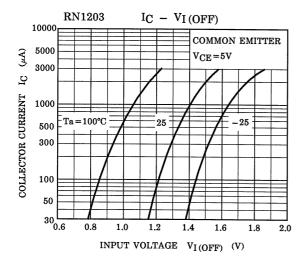


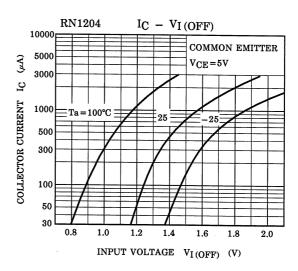


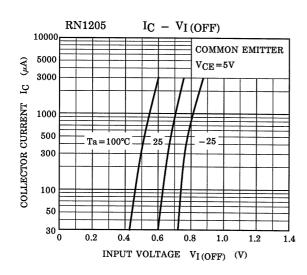
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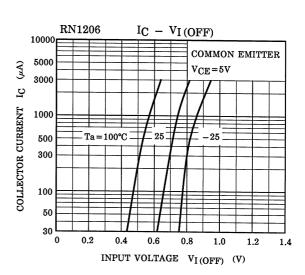


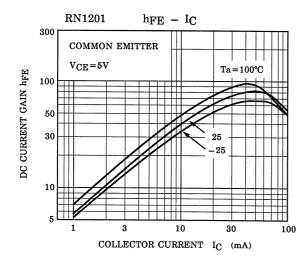


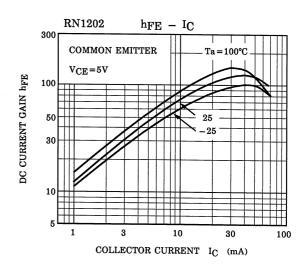


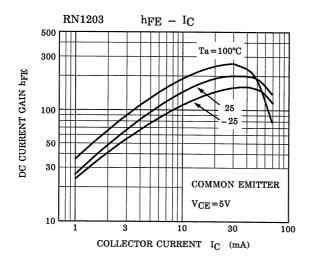


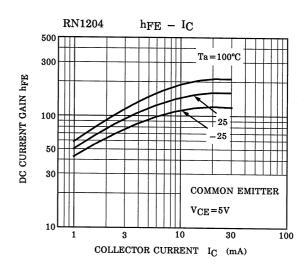


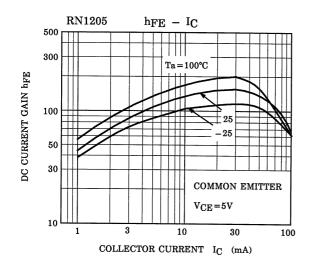


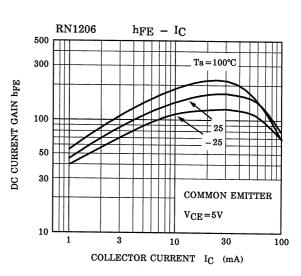












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