

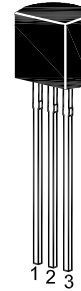
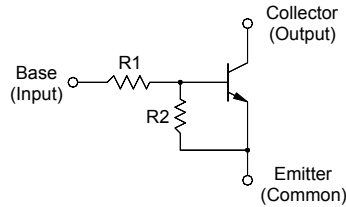
RC101S...RC106S

NPN Silicon Epitaxial Planar Transistor

for switching and interface circuit and drive circuit applications

Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process



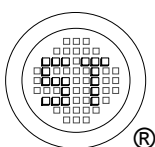
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

Resistor Values

Type	R1 (K Ω)	R2 (K Ω)
RC101S	4.7	4.7
RC102S	10	10
RC103S	22	22
RC104S	47	47
RC105S	2.2	47
RC106S	4.7	47

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit	
Output Voltage	V_o	50	V	
Input Voltage	V_i	RC101S	20, -10	V
		RC102S	30, -10	
		RC103S	40, -10	
		RC104S	40, -10	
		RC105S	12, -5	
		RC106S	20, -5	
Output Current	I_o	100	mA	
Total Power Dissipation	P_{tot}	200	mW	
Junction Temperature	T_j	150	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$	



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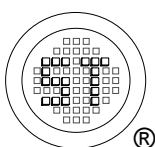
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RC101S...RC106S

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_O = 5\text{ V}$, $I_O = 10\text{ mA}$	RC101S	30	-	-	-
	RC102S	50	-	-	-
	RC103S	70	-	-	-
	RC104S	80	-	-	-
	RC105S	80	-	-	-
	RC106S	80	-	-	-
Output Cutoff Current at $V_O = 50\text{ V}$	$I_{O(OFF)}$	-	-	500	nA
Input Current at $V_I = 5\text{ V}$	RC101S	-	-	1.8	mA
	RC102S	-	-	0.88	
	RC103S	-	-	0.36	
	RC104S	-	-	0.18	
	RC105S	-	-	3.6	
	RC106S	-	-	1.8	
Output Voltage at $I_O = 10\text{ mA}$, $I_I = 0.5\text{ mA}$	$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_O = 0.2\text{ V}$, $I_O = 5\text{ mA}$	RC101S	-	-	2	V
	RC102S	-	-	2.4	
	RC103S	-	-	3	
	RC104S	-	-	5	
	RC105S	-	-	1.1	
	RC106S	-	-	1.3	
Input Voltage (OFF) at $V_O = 5\text{ V}$, $I_O = 0.1\text{ mA}$	RC101S~104S	1	-	-	V
	RC105S~106S	0.5	-	-	
Transition Frequency at $V_O = 10\text{ V}$, $I_O = 5\text{ mA}$	f_T ¹⁾	-	200	-	MHz

¹⁾ Characteristic of transistor only.



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