

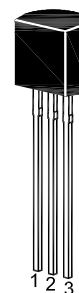
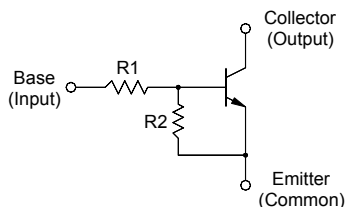
RC101S...RC106S

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 (KΩ)	R2 (KΩ)
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	$^\circ\text{C}$	

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.