

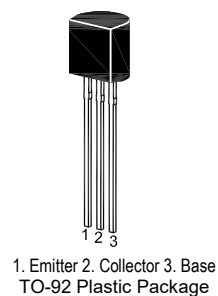
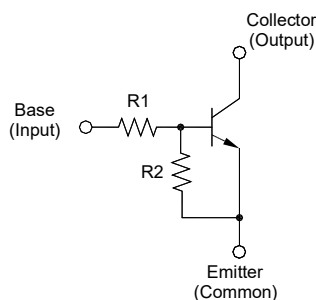
RC107S...RC109S

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

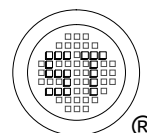


Resistor Values

Type	R1 (K Ω)	R2 (K Ω)
RC107S	10	47
RC108S	22	47
RC109S	47	22

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

Parameter		Symbol	Value	Unit
Output Voltage		V_o	50	V
Input Voltage	RC107S	V_i	30, -6	V
	RC108S		40, -7	
	RC109S		40, -15	
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	$^\circ\text{C}$

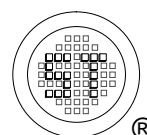


RC107S...RC109S

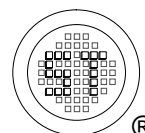
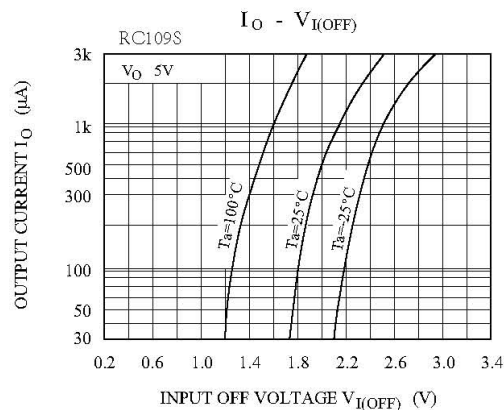
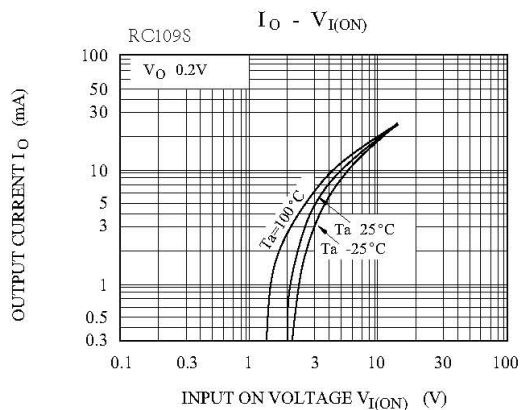
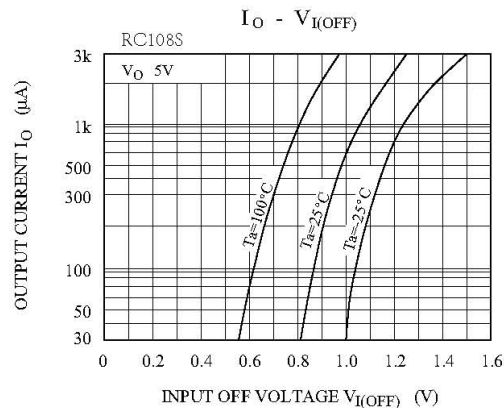
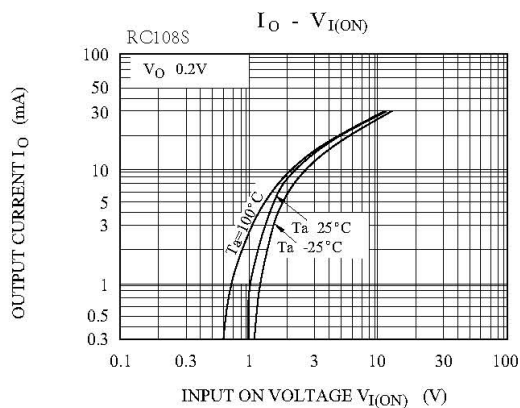
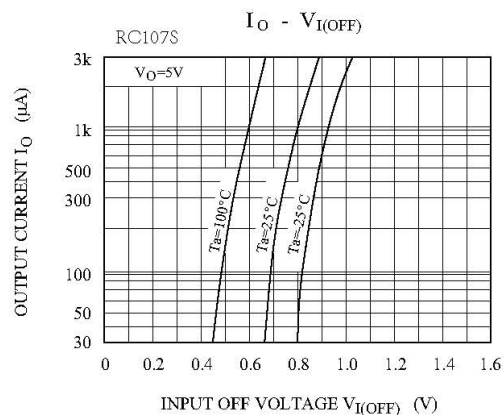
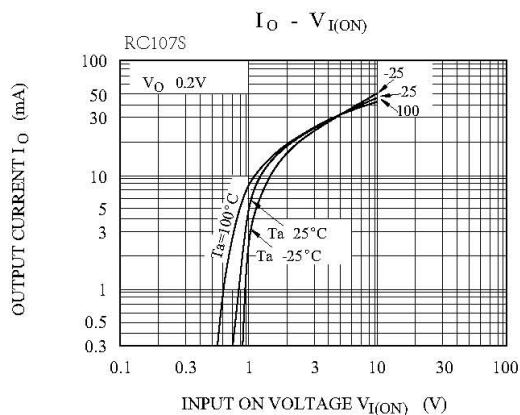
Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_O = 5\text{ V}$, $I_O = 10\text{ mA}$	RC107S RC108S RC109S	G_I	80 80 70	- - -	- - -	- - -
Output Cutoff Current at $V_O = 50\text{ V}$		$I_{O(OFF)}$	-	-	500	nA
Input Current at $V_I = 5\text{ V}$	RC107S RC108S RC109S	I_I	- - -	- - -	0.88 0.36 0.16	mA
Output Voltage at $I_O = 10\text{ mA}$, $I_I = 0.5\text{ mA}$		$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_O = 0.2\text{ V}$, $I_O = 5\text{ mA}$	RC107S RC108S RC109S	$V_{I(ON)}$	- - -	- - -	1.8 2.6 5.8	V
Input Voltage (OFF) at $V_O = 5\text{ V}$, $I_O = 0.1\text{ mA}$	RC107S RC108S RC109S	$V_{I(OFF)}$	0.5 0.6 1.5	- - -	- - -	V
Transition Frequency at $V_O = 10\text{ V}$, $I_O = 5\text{ mA}$		$f_T^{1)}$	-	200	-	MHz

¹⁾ Characteristic of transistor only.



RC107S...RC109S



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