

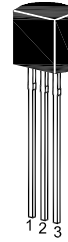
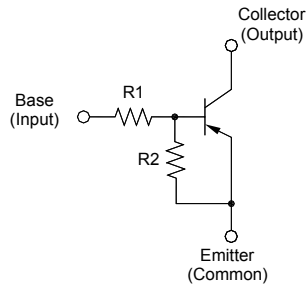
RA107S...RA109S

PNP Silicon Epitaxial Planar Transistor

for switching, interface circuit and drive circuit applications

Features

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



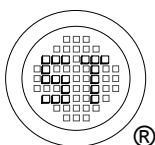
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

Resistor Values

Type	R1 (KΩ)	R2 (KΩ)
RA107S	10	47
RA108S	22	47
RA109S	47	22

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

Parameter	Symbol	Value	Unit
Output Voltage	$-V_o$	50	V
Input Voltage	V_i	RA107S - 30, 6	V
		RA108S - 40, 7	
		RA109S - 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	$^\circ\text{C}$



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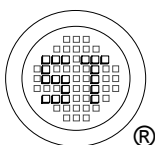


RA107S...RA109S

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_o = 5\text{ V}$, $-I_o = 10\text{ mA}$	RA107S RA108S RA109S G_i	80 80 70	- - -	- - -	- - -
Output Cutoff Current at $-V_o = 50\text{ V}$	$-I_{O(OFF)}$	-	-	500	nA
Input Current at $-V_i = 5\text{ V}$	RA107S RA108S RA109S $-I_i$	- - -	- - -	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 $-V_o = 0.2\text{ V}$, $-I_o = 5\text{ mA}$	RA107S RA108S RA109S $-V_{I(ON)}$	- - -	- - -	1.8 2.6 5.8	V
Input Voltage (OFF) at $-V_o = 5\text{ V}$, $-I_o = 0.1\text{ mA}$	RA107S RA108S RA109S $-V_{I(OFF)}$	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.

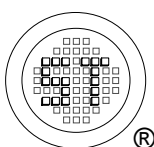
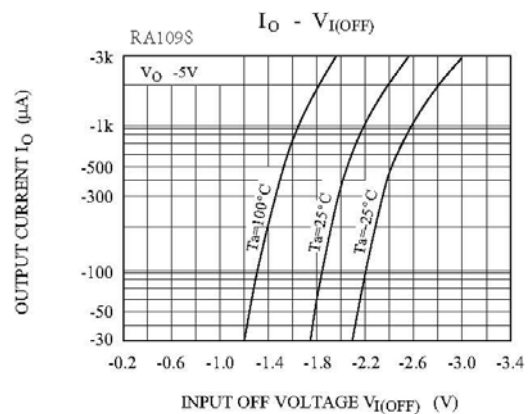
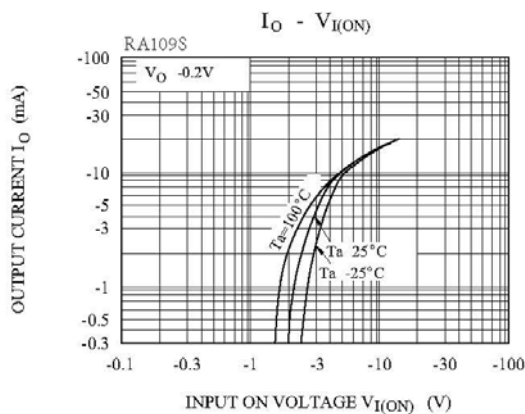
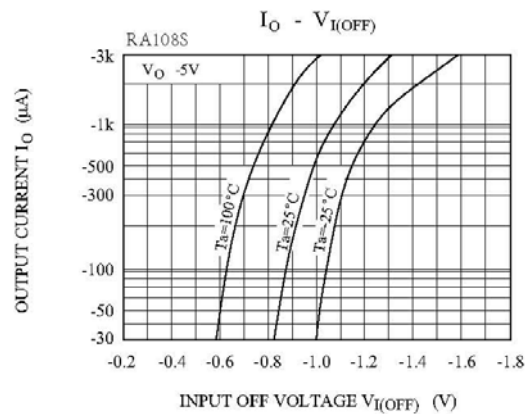
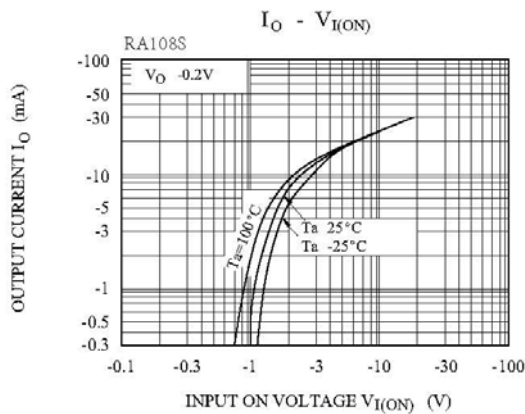
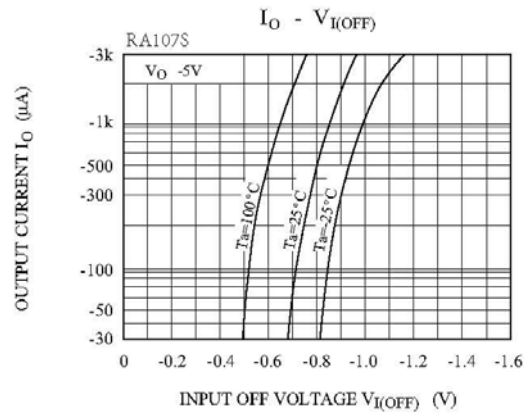
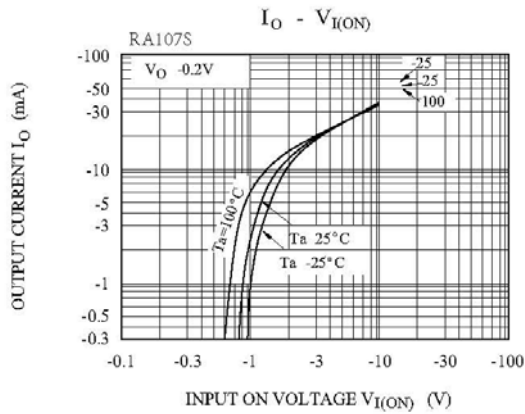


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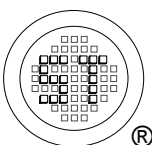
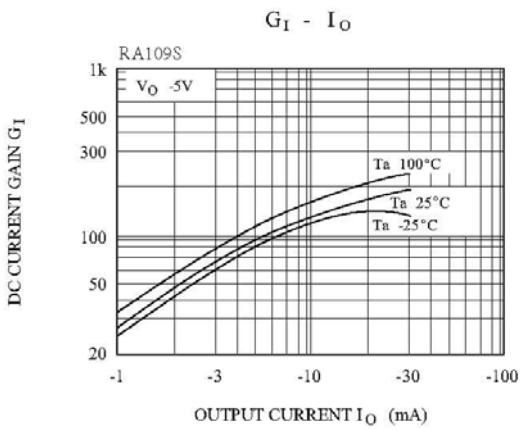
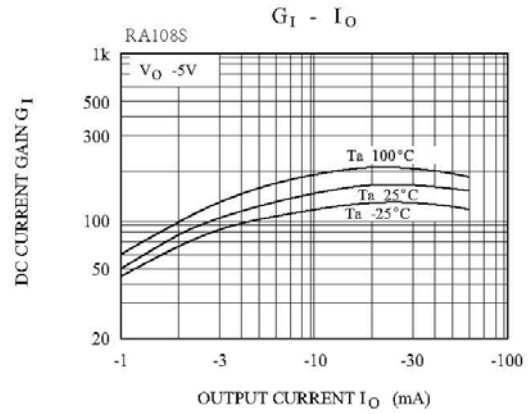
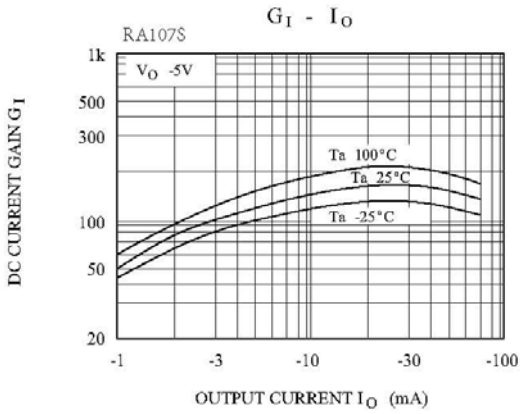
RA107S...RA109S



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