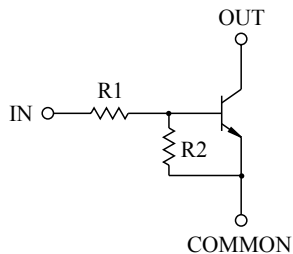


NPN Transistors

KRC107S ~ KRC109S

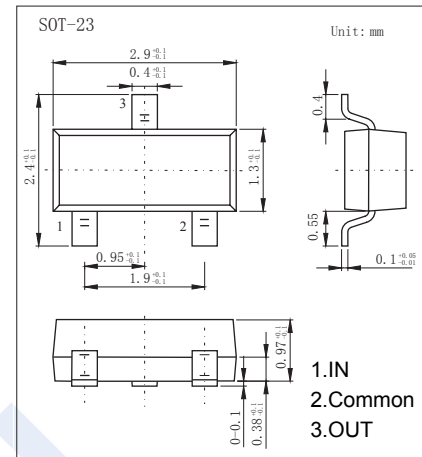
■ Features

- With Built in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Digital Transistors



BIAS RESISTOR VALUES

TYPE NO.	R1(k Ω)	R2(k Ω)
KRC107S	10	47
KRC108S	22	47
KRC109S	47	22



■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Output Voltage		V _o	50	V
Input Voltage	KRC107S	V _i	30,-6	
	KRC108S		40,-7	
	KRC109S		40,-15	
Output Current		I _o	100	mA
Power Dissipation		P _D	200	mW
Junction Temperature		T _J	150	°C
Storage Temperature Range		T _{stg}	-55 to 150	

NPN Transistors

KRC107S ~ KRC109S

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

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage		$V_{O(ON)}$	$I_o = 10\text{mA}$, $I_i = 0.5\text{mA}$			0.3	V
Input Voltage (ON)	KRC107S	$V_{I(ON)}$	$V_o = 200\text{ mV}$, $I_o = 5\text{mA}$			1.8	
	KRC108S					2.6	
	KRC109S					5.8	
Input Voltage (OFF)	KRC107S	$V_{I(OFF)}$	$V_o = 5\text{ V}$, $I_o = 0.1\text{mA}$	0.5			
	KRC108S			0.6			
	KRC109S			1.5			
Output Cut-off Current		$I_{O(OFF)}$	$V_o = 50\text{ V}$, $V_i = 0$			500	nA
Input Current	KRC107S	I_i	$V_i = 5\text{V}$			0.88	mA
	KRC108S					0.36	
	KRC109S					0.16	
DC current gain	KRC107S	h_{FE}	$V_o = 5\text{V}$, $I_o = 10\text{mA}$	80			
	KRC108S			80			
	KRC109S			70			
Rise Time	KRC107S	t_{rr}	$V_o = 5\text{V}$, $V_{IN} = 5\text{V}$, $R_L = 1\text{K}\Omega$		0.05		us
	KRC108S				0.12		
	KRC109S				0.26		
Storage Time	KRC107S	t_{stg}			2		
	KRC108S				2.4		
	KRC109S				1.5		
Fall Time	KRC107S	t_f			0.36		
	KRC108S				0.4		
	KRC109S				0.41		
Transition frequency		f_T	$V_o = 10\text{V}$, $I_o = 5\text{ mA}$		200		MHz

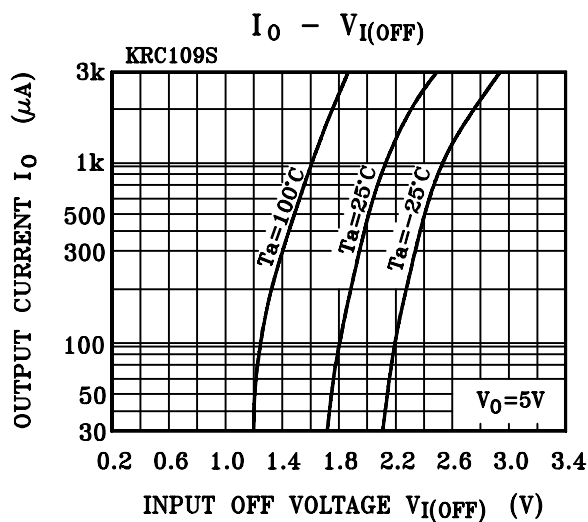
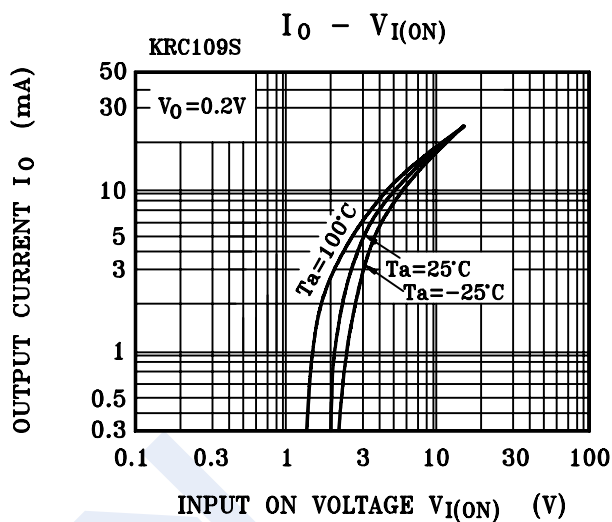
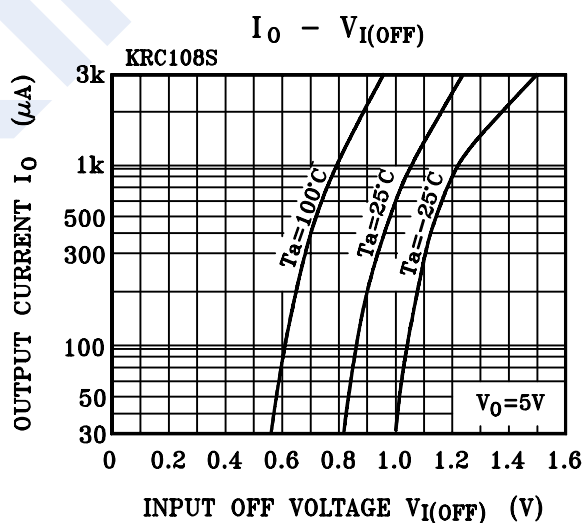
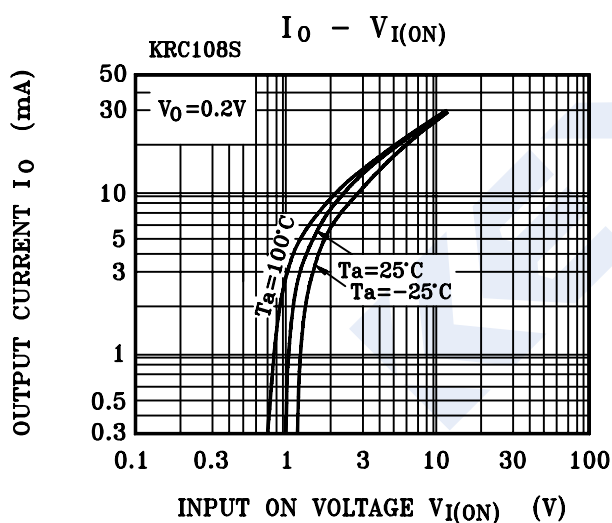
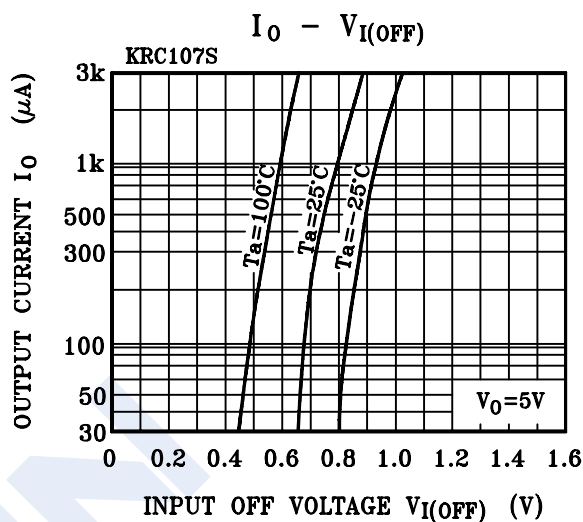
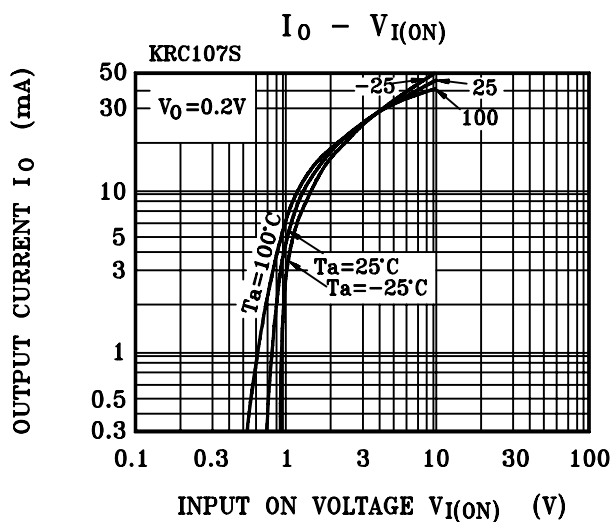
■ Marking

No	KRC107S	KRC108S	KRC109S
Marking	NH	NI	NJ

NPN Transistors

KRC107S ~ KRC109S

■ Typical Characteristics



NPN Transistors

KRC107S ~ KRC109S

■ Typical Characteristics

