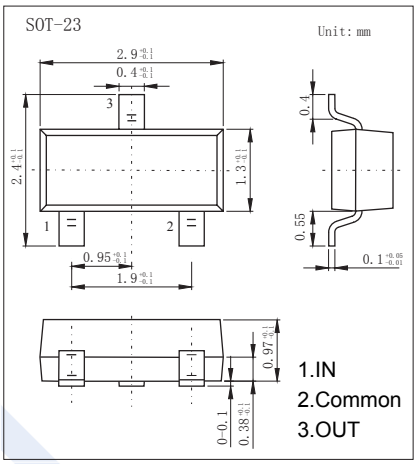
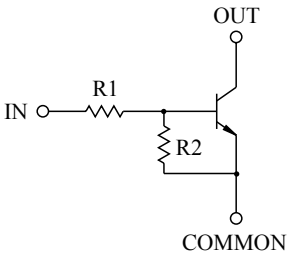
NPN Transistors

KRC107S ~ KRC109S



■ Features

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



BIAS RESISTOR VALUES

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

■ Absolute Maximum Ratings Ta = 25℃

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	℃
Storage Temperature Range		T_{stg}	-55 to 150	

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■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage		$V_{O(ON)}$	I_O= 10mA, I_I= 0.5mA			0.3	V
Input Voltage (ON)	KRC107S	$V_{I(ON)}$	V_O= 200 mV, I_O= 5mA			1.8	
	KRC108S					2.6	
	KRC109S					5.8	
Input Voltage (OFF)	KRC107S	$V_{I(OFF)}$	V_O= 5 V, I_O= 0.1mA	0.5			
	KRC108S			0.6			
	KRC109S			1.5			
Output Cut-off Current		$I_{O(OFF)}$	V_O= 50 V , V_I= 0			500	nA
Input Current	KRC107S	I_I	V_I = 5V			0.88	mA
	KRC108S					0.36	
	KRC109S					0.16	
DC current gain	KRC107S	h_{FE}	V_O= 5V, I_O= 10mA	80			
	KRC108S			80			
	KRC109S			70			
Rise Time	KRC107S	t_{rr}	V_O=5V,V_{IN}=5V,R_L=1KΩ		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= 10V, I_O= 5 mA		200		MHz

■ Marking

No	KRC107S	KRC108S	KRC109S
Marking	NH	NI	NJ

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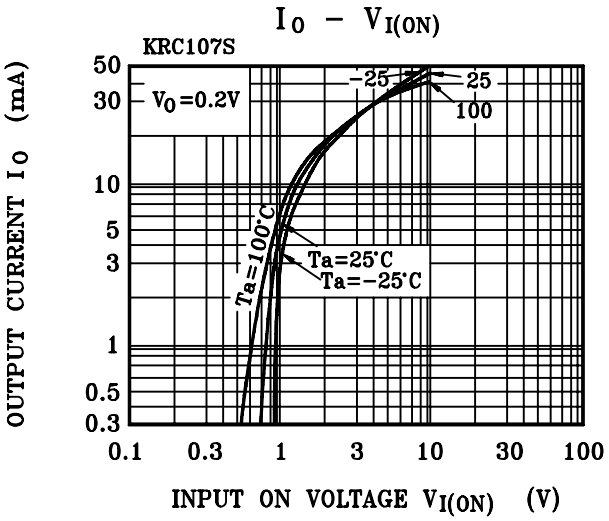
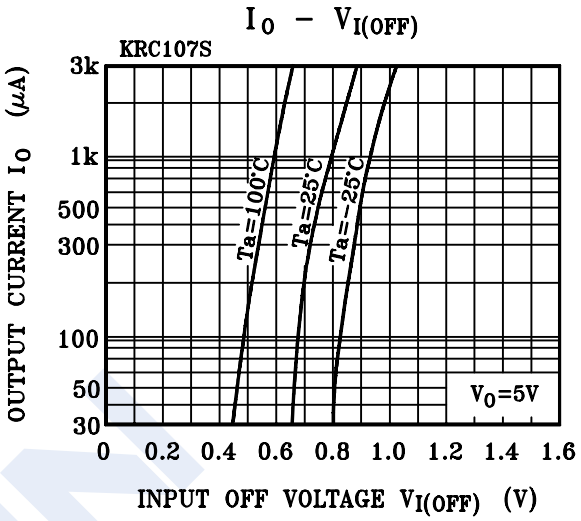
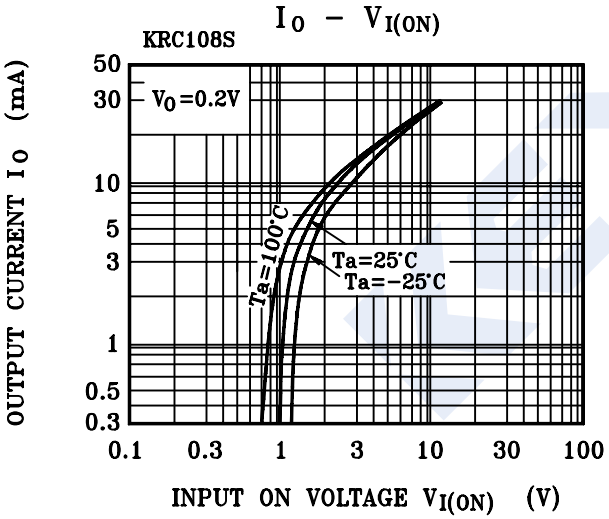
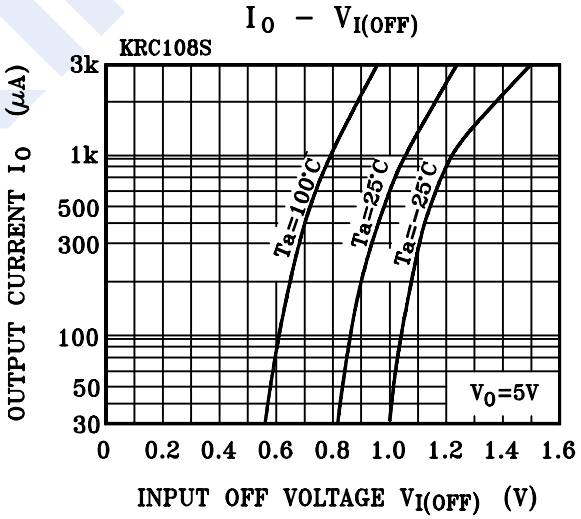
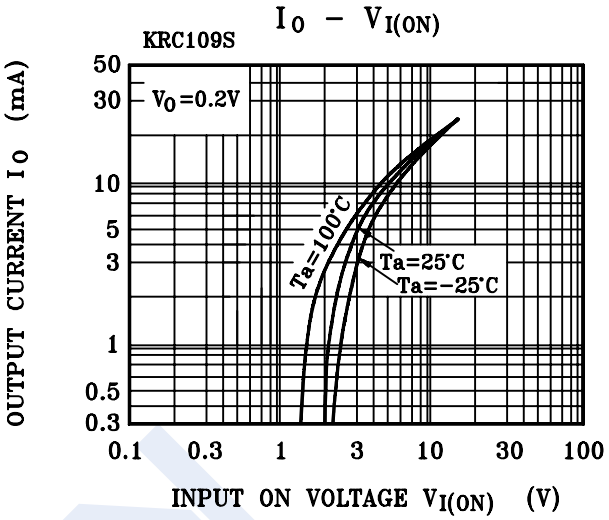
■ Typical Characterisitics

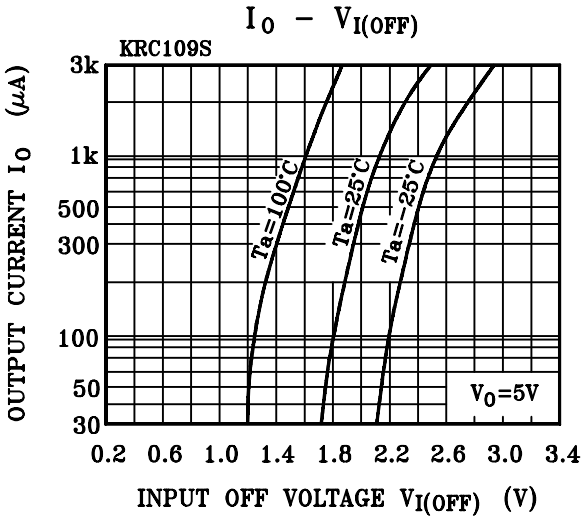












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■ Typical Characterisitics