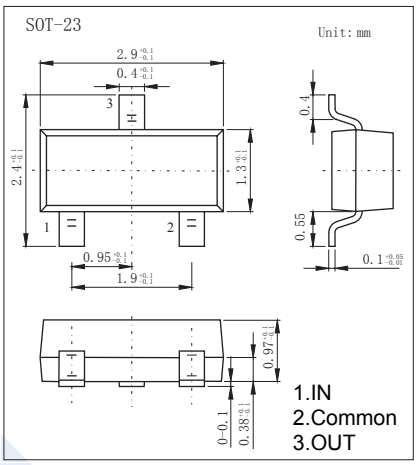
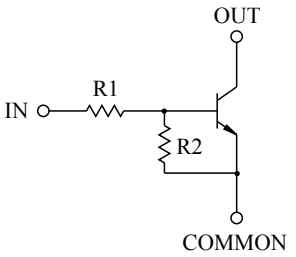
NPN Transistors

KRC116S ~ KRC122S



■ Features

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



TYPE NO.	R1(kΩ)	R2(kΩ)
KRC116S	1	10
KRC117S	2.2	2.2
KRC118S	2.2	10
KRC119S	4.7	10
KRC120S	10	4.7
KRC121S	47	10
KRC122S	100	100

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Output Voltage		V_O	50	V
Input Voltage	KRC116S	V_I	10,-5	
	KRC117S		12,-10	
	KRC118S		12,-5	
	KRC119S		20,-7	
	KRC120S		30,-10	
	KRC121S		40,-15	
	KRC122S		40,-10	
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	

NPN Transistors

KRC116S ~ KRC122S

■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	KRC116S	$V_{O(ON)}$	I_O= 10mA, I_I= 0.5mA			0.3	V
	KRC117S						
	KRC118S						
	KRC119S						
	KRC120S						
	KRC121S						
	KRC122S		I_O= 10mA, I_I= 0.25mA				
Input Voltage (ON)	KRC116S	$V_{I(ON)}$	V_O= 300 mV, I_O= -20mA			3	
	KRC117S					3	
	KRC118S					3	
	KRC119S					2.5	
	KRC120S		V_O= 300 mV, I_O= -2mA			3	
	KRC121S					5	
	KRC122S		V_O= 300 mV, I_O= -1mA			3	
Input Voltage (OFF)	KRC116S	$V_{I(OFF)}$	V_O= 5 V, I_O= 100uA	0.3			
	KRC117S			0.5			
	KRC118S			0.3			
	KRC119S			0.3			
	KRC120S			0.8			
	KRC121S			1			
	KRC122S			0.5			
Output Cut-off Current		$I_{O(OFF)}$	V_O= 50 V , V_I= 0			500	nA
Input Current	KRC116S	I_I	V_I = 5V			7.2	mA
	KRC117S					3.8	
	KRC118S					3.8	
	KRC119S					1.8	
	KRC120S					0.88	
	KRC121S					0.16	
	KRC122S					0.15	
DC current gain	KRC116S	h_{FE}	V_O= 5V, I_O= 5mA	33			
	KRC117S		V_O= 5V, I_O= 20mA	20			
	KRC118S		V_O= 5V, I_O= 10mA	33			
	KRC119S		V_O= 5V, I_O= 10mA	30			
	KRC120S		V_O= 5V, I_O= 10mA	24			
	KRC121S		V_O= 5V, I_O= 5mA	33			
	KRC122S		V_O= 5V, I_O= 5mA	62			
Transition frequency		f_T	V_O= 10V, I_O= 5 mA		250		MHz

■ Marking

No	KRC116S	KRC117S	KRC118S	KRC119S	KRC120S	KRC121S	KRC122S
Marking	N2	N4	N5	N6	N7	N8	N9