

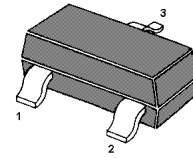
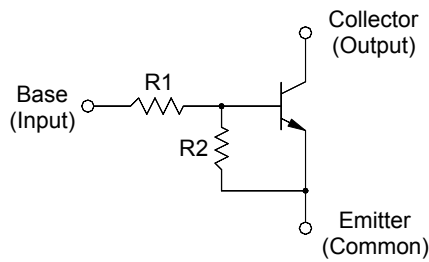
# KRC101S...KRC106S

## 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



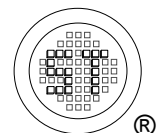
1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

### Resistor Values & Marking Code

Type	Marking Code	R1 (K $\Omega$ )	R2 (K $\Omega$ )
KRC101S	NA	4.7	4.7
KRC102S	NB	10	10
KRC103S	NC	22	22
KRC104S	ND	47	47
KRC105S	NE	2.2	47
KRC106S	NF	4.7	47

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

Parameter		Symbol	Value	Unit
Output Voltage		$V_o$	50	V
Input Voltage	KRC101S	$V_i$	20, -10	V
	KRC102S		30, -10	
	KRC103S		40, -10	
	KRC104S		40, -10	
	KRC105S		12, -5	
	KRC106S		20, -5	
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	$^\circ\text{C}$



# KRC101S...KRC106S

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_O = 5\text{ V}$ , $I_O = 10\text{ mA}$	G <sub>I</sub>	KRC101S 30	-	-	-
KRC102S 50		-	-	-	
KRC103S 70		-	-	-	
KRC104S 80		-	-	-	
KRC105S 80		-	-	-	
KRC106S 80		-	-	-	
Output Cutoff Current at $V_O = 50\text{ V}$	$I_{O(OFF)}$	-	-	500	nA
Input Current at $V_I = 5\text{ V}$	I <sub>I</sub>	KRC101S -	-	1.8	mA
KRC102S -		-	0.88		
KRC103S -		-	0.36		
KRC104S -		-	0.18		
KRC105S -		-	3.6		
KRC106S -		-	1.8		
Output Voltage at $I_O = 10\text{ mA}$ , $I_I = 0.5\text{ mA}$	$V_{O(ON)}$	-	-	0.3	V
Input Voltage (ON) at $V_O = 0.2\text{ V}$ , $I_O = 5\text{ mA}$	$V_{I(ON)}$	KRC101S -	-	2	V
KRC102S -		-	2.4		
KRC103S -		-	3		
KRC104S -		-	5		
KRC105S -		-	1.1		
KRC106S -		-	1.3		
Input Voltage (OFF) at $V_O = 5\text{ V}$ , $I_O = 0.1\text{ mA}$	$V_{I(OFF)}$	KRC101S~104S 1	-	-	V
KRC105S~106S 0.5		-	-		
Transition Frequency at $V_O = 10\text{ V}$ , $I_O = 5\text{ mA}$	$f_T$ <sup>1)</sup>	-	200	-	MHz

<sup>1)</sup> Characteristic of transistor only.

