

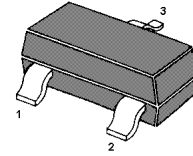
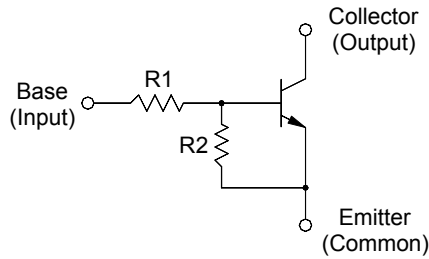
KRC101S...KRC106S

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



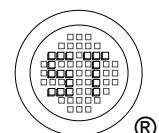
1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

Resistor Values & Marking Code

Type	Marking Code	R1 (K Ω)	R2 (K Ω)
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 $V_O = 5\text{ V}$, $I_O = 10\text{ mA}$	KRC101S KRC102S KRC103S KRC104S KRC105S KRC106S	G_I	30 50 70 80 80 80	- - - - - -	- - - - - -
Output Cutoff Current at $V_O = 50\text{ V}$		$I_{O(OFF)}$	-	-	500 nA
Input Current at $V_I = 5\text{ V}$	KRC101S KRC102S KRC103S KRC104S KRC105S KRC106S	I_I	- - - - - -	- - - - - -	1.8 0.88 0.36 0.18 3.6 1.8 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 $V_O = 0.2\text{ V}$, $I_O = 5\text{ mA}$	KRC101S KRC102S KRC103S KRC104S KRC105S KRC106S	$V_{I(ON)}$	- - - - - -	- - - - - -	2 2.4 3 5 1.1 1.3 V
Input Voltage (OFF) at $V_O = 5\text{ V}$, $I_O = 0.1\text{ mA}$	KRC101S~104S KRC105S~106S	$V_{I(OFF)}$	1 0.5	- -	- - V
Transition Frequency at $V_O = 10\text{ V}$, $I_O = 5\text{ mA}$		$f_T^{1)}$	-	200	- MHz

¹⁾ Characteristic of transistor only.

