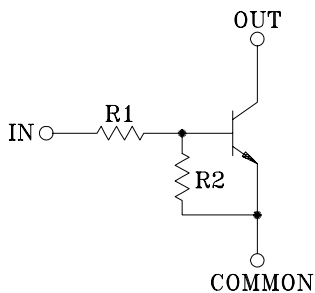


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

FEATURES

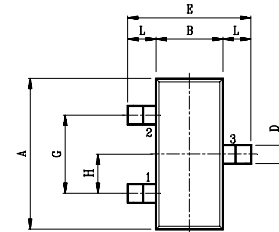
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT

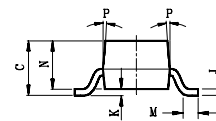


BIAS RESISTOR VALUES

TYPE NO.	R1(k Ω)	R2(k Ω)
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



DIM	MILLIMETERS
A	2.93 $\pm$ 0.20
B	1.30 $\pm$ 0.20/-0.15
C	1.30 MAX
D	0.45 $\pm$ 0.15/-0.05
E	2.40 $\pm$ 0.30/-0.20
G	1.90
H	0.95
J	0.13 $\pm$ 0.10/-0.05
K	0.00 - 0.10
L	0.55
M	0.20 MIN
N	1.00 $\pm$ 0.20/-0.10
P	7 $^\circ$



1. EMITTER
2. BASE
3. COLLECTOR

SOT-23

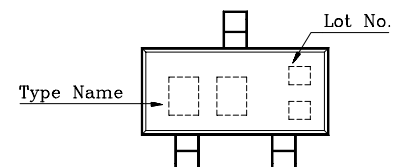
MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC116S ~ 122S	V _o	50	V
	KRC116S		10, -5	
	KRC117S		12, -10	
	KRC118S		12, -5	
	KRC119S		20, -7	
	KRC120S		30, -10	
	KRC121S		40, -15	
Input Voltage	KRC122S	V _i	40, -10	V
Output Current		I _o	100	mA
Power Dissipation		P _d	200	mW
Junction Temperature		T _i	150	°C
Storage Temperature Range	KRC116S ~ 122S	T _{stg}	-55 ~ 150	°C

MARK SPEC

TYPE	KRC116S	KRC117S	KRC118S	KRC119S	KRC120S	KRC121S	KRC122S
MARK	N2	N4	N5	N6	N7	N8	N9

Marking



KRC116S ~ KRC122S

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC116S ~ 122S	$I_{O(OFF)}$	$V_O=50V, V_I=0$	–	–	500	nA
DC Current Gain	KRC116S	G_I	$V_O=5V, I_O=5mA$	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	–	–	
Output Voltage	KRC116S	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	–	–	0.3	V
	KRC117S		$I_O=10mA, I_I=0.5mA$	–	0.1	0.3	
	KRC118S		$I_O=10mA, I_I=0.5mA$	–	–	0.3	
	KRC119S		$I_O=10mA, I_I=0.5mA$	–	0.1	0.3	
	KRC120S		$I_O=10mA, I_I=0.5mA$	–	0.1	0.3	
	KRC121S		$I_O=10mA, I_I=0.5mA$	–	0.1	0.3	
	KRC122S		$I_O=5mA, I_I=0.25mA$	–	0.1	0.3	
Input Voltage (ON)	KRC116S	$V_{I(ON)}$	$V_O=0.3V, I_O=-20mA$	–	0.98	3	V
	KRC117S		$V_O=0.3V, I_O=-20mA$	–	1.83	3	
	KRC118S		$V_O=0.3V, I_O=-20mA$	–	1.22	3	
	KRC119S		$V_O=0.3V, I_O=-20mA$	–	1.76	2.5	
	KRC120S		$V_O=0.3V, I_O=-2mA$	–	2	3	
	KRC121S		$V_O=0.3V, I_O=-2mA$	–	3.9	5	
	KRC122S		$V_O=0.3V, I_O=-1mA$	–	1.64	3	
Input Voltage (OFF)	KRC116S	$V_{I(OFF)}$	$V_{CC}=5V, I_O=100\mu A$	0.3	0.63	–	V
	KRC117S			0.5	1.15	–	
	KRC118S			0.3	0.67	–	
	KRC119S			0.3	0.82	–	
	KRC120S			0.8	1.68	–	
	KRC121S			1	3.09	–	
	KRC122S			0.5	1.17	–	
Transition Frequency	KRC116S ~ 122S	f_T^*	$V_O=10V, I_O=5mA$	–	250	–	MHz
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	

Note : *Characteristic of Transistor Only