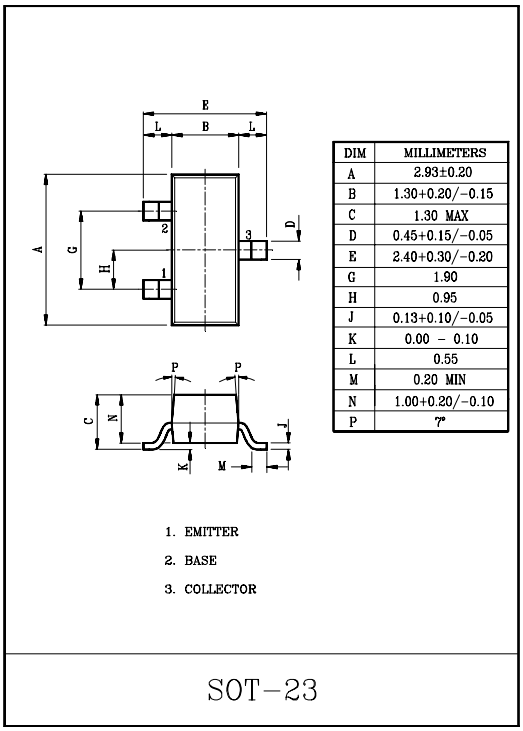
SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

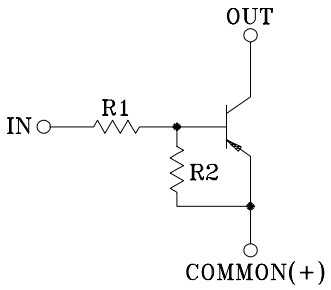
FEATURES
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.



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

SOT-23

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRA116S	1	10
KRA117S	2.2	2.2
KRA118S	2.2	10
KRA119S	4.7	10
KRA120S	10	4.7
KRA121S	47	10
KRA122S	100	100

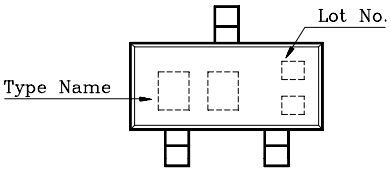
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRA116S~122S	V_O	-50	V
	KRA116S		-10, 5	
	KRA117S		-12, 10	
	KRA118S		-12, 5	
	KRA119S		-20, 7	
	KRA120S		-30, 10	
	KRA121S		-40, 15	
Input Voltage	KRA122S	V_I	-40, 10	V
Output Current		I_O	-100	mA
Power Dissipation		P_D	200	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range	KRA116S~122S	T_{stg}	-55~150	℃

MARK SPEC

TYPE	KRA116S	KRA117S	KRA118S	KRA119S	KRA120S	KRA121S	KRA122S
MARK	P2	P4	P5	P6	P7	P8	P9

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRA116S~122S	$I_{O(OFF)}$	V_O=-50V, V_I=0	-	-	-500	nA
DC Current Gain	KRA116S	G_I	V_O=-5V, I_O=-5mA	33	-	-	
	KRA117S		V_O=-5V, I_O=-20mA	20	-	-	
	KRA118S		V_O=-5V, I_O=-10mA	33	-	-	
	KRA119S		V_O=-5V, I_O=-10mA	30	-	-	
	KRA120S		V_O=-5V, I_O=-10mA	24	-	-	
	KRA121S		V_O=-5V, I_O=-5mA	33	-	-	
	KRA122S		V_O=-5V, I_O=-5mA	62	-	-	
Output Voltage	KRA116S	$V_{O(ON)}$	I_O=-10mA, I_I=-0.5mA	-	-	-0.3	V
	KRA117S		I_O=-10mA, I_I=-0.5mA	-	-0.1	-0.3	
	KRA118S		I_O=-10mA, I_I=-0.5mA	-	-	-0.3	
	KRA119S		I_O=-10mA, I_I=-0.5mA	-	-0.1	-0.3	
	KRA120S		I_O=-10mA, I_I=-0.5mA	-	-0.1	-0.3	
	KRA121S		I_O=-10mA, I_I=-0.5mA	-	-0.1	-0.3	
	KRA122S		I_O=-5mA, I_I=-0.25mA	-	-0.1	-0.3	
Input Voltage (ON)	KRA116S	$V_{I(ON)}$	V_O=-0.3V, I_O=-20mA	-	-0.98	-3	V
	KRA117S		V_O=-0.3V, I_O=-20mA	-	-1.83	-3	
	KRA118S		V_O=-0.3V, I_O=-20mA	-	-1.22	-3	
	KRA119S		V_O=-0.3V, I_O=-20mA	-	-1.76	-2.5	
	KRA120S		V_O=-0.3V, I_O=-2mA	-	-2	-3	
	KRA121S		V_O=-0.3V, I_O=-2mA	-	-3.9	-5	
	KRA122S		V_O=-0.3V, I_O=-1mA	-	-1.64	-3	
Input Voltage (OFF)	KRA116S	$V_{I(OFF)}$	V_{CC}=-5V, I_O=-100μA	-0.3	-0.63	-	V
	KRA117S			-0.5	-1.15	-	
	KRA118S			-03	-0.67	-	
	KRA119S			-0.3	-0.82	-	
	KRA120S			-0.8	-1.68	-	
	KRA121S			-1	-3.09	-	
	KRA122S			-0.5	-1.17	-	
Transition Frequency	KRA116S~122S	f_T*	V_O=-10V, I_O=-5mA	-	250	-	MHz
Input Current	KRA116S	I_I	V_I=-5V	-	-	-7.2	mA
	KRA117S			-	-	-3.8	
	KRA118S			-	-	-3.8	
	KRA119S			-	-	-1.8	
	KRA120S			-	-	-0.88	
	KRA121S			-	-	-0.16	
	KRA122S			-	-	-0.15	

Note : *Characteristic of Transistor Only