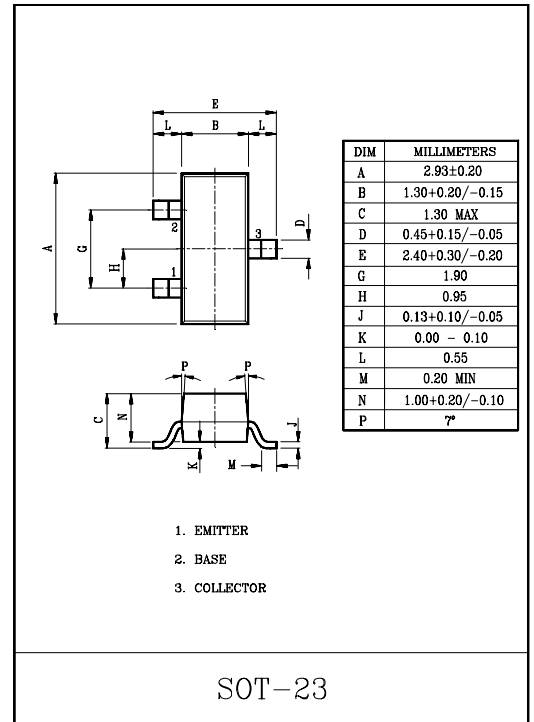
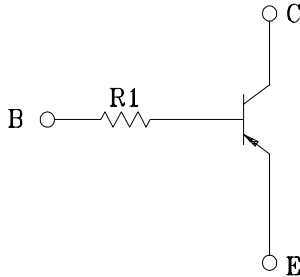


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

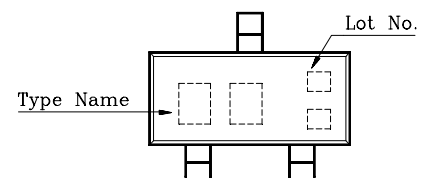
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=-50V, I_E=0$	-	-	-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=-5V, I_C=0$	-	-	-100	nA
DC Current Gain	h_{FE}	$V_{CE}=-5V, I_C=-1mA$	120	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$	-	-0.1	-0.3	V
Transition Frequency	f_T *	$V_{CE}=-10V, I_C=-5mA$	-	250	-	MHz
Input Resistor	KRA110S	R_i		4.7	-	kΩ
	KRA111S			10	-	
	KRA112S			100	-	
	KRA113S			22	-	
	KRA114S			47	-	

Note : *Characteristic of Transistor Only

MARK SPEC

TYPE	KRA110S	KRA111S	KRA112S	KRA113S	KRA114S
MARK	PK	PM	PN	PO	PP

Marking



KRA110S ~ KRA114S

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRA110S	t _r	V _O =-5V V _{IN} =-5V R _L =1kΩ	-	0.2	-	μS
		KRA111S			-	0.065	-	
		KRA112S			-	0.4	-	
		KRA113S			-	0.1	-	
		KRA114S			-	0.15		
	Storage Time	KRA110S	t _{stg}		-	2.0	-	
		KRA111S			-	1.7	-	
		KRA112S			-	3.0	-	
		KRA113S			-	2.0	-	
		KRA114S			-	1.5	-	
	Fall Time	KRA110S	t _f		-	0.3	-	
		KRA111S			-	0.3	-	
		KRA112S			-	1.7	-	
		KRA113S			-	0.8	-	
		KRA114S			-	1.5	-	