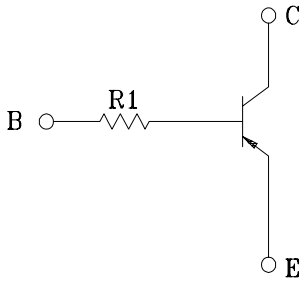
KRA110S ~ KRA114S

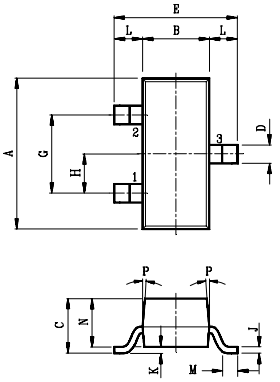
EPITAXIAL PLANAR PNP TRANSISTOR

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





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°

1. EMITTER
2. BASE
3. COLLECTOR

SOT-23

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℃)

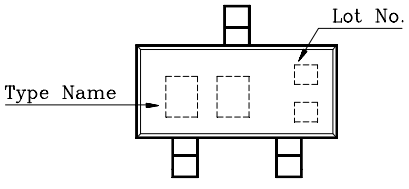
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-100	nA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-100	nA
DC Current Gain		h_{FE}	V_{CE}=-5V, I_C=-1mA	120	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-10mA, 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_1		-	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



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	-	