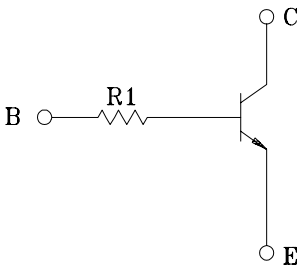
KRC110S ~ KRC114S

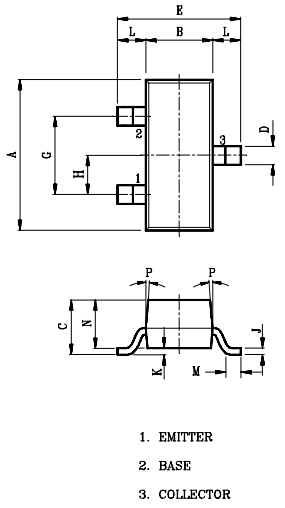
EPITAXIAL PLANAR NPN TRANSISTOR

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℃)

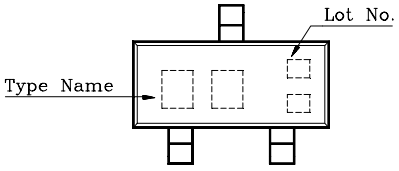
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=50V, I_E=0	-	-	100	nA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	100	nA
DC Current Gain		h_{FE}	V_{CE}=5V, I_C=1mA	120	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA	-	0.1	0.3	V
Transition Frequency		f_T *	V_{CE}=10V, I_C=5mA	-	250	-	MHz
Input Resistor	KRC110S	R_1		-	4.7	-	kΩ
	KRC111S			-	10	-	
	KRC112S			-	100	-	
	KRC113S			-	22	-	
	KRC114S			-	47	-	

Note : * Characteristic of Transistor Only

MARK SPEC

TYPE	KRC110S	KRC111S	KRC112S	KRC113S	KRC114S
MARK	NK	NM	NN	NO	NP

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC110S	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.025	-	μS
		KRC111S			-	0.03	-	
		KRC112S			-	0.3	-	
		KRC113S			-	0.06	-	
		KRC114S			-	0.11		
	Storage Time	KRC110S	t_{stg}		-	3.0	-	
		KRC111S			-	2.0	-	
		KRC112S			-	6.0	-	
		KRC113S			-	4.0	-	
		KRC114S			-	5.0	-	
	Fall Time	KRC110S	t_f		-	0.2	-	
		KRC111S			-	0.12	-	
		KRC112S			-	2.0	-	
		KRC113S			-	0.9	-	
		KRC114S			-	1.4	-	