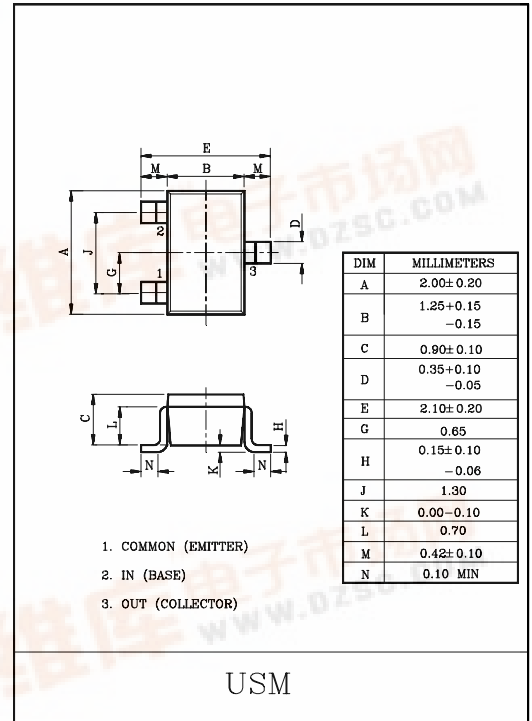
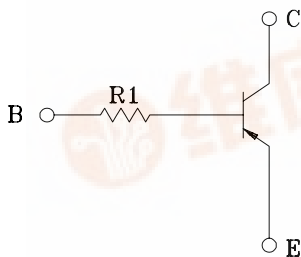


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta=25°C)

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	100	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

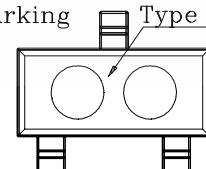
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} =-50V, I _E =0	-	-	-100	nA
Emitter Cut-off Current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-	-100	nA
DC Current Gain	h _{FE}	V _{CE} =-5V, I _C =-1mA	120	-	-	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	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	KRA310	R _i	-	4.7	-	kΩ
	KRA311		-	10	-	
	KRA312		-	100	-	
	KRA313		-	22	-	
	KRA314		-	47	-	

Note : *Characteristic of Transistor Only

MARK SPEC

TYPE	KRA310	KRA311	KRA312	KRA313	KRA314
MARK	PK	PM	PN	PO	PP

Marking Type Name



KRA310~KRA314

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRA310	V _O =-5V V _{IN} =-5V R _L =1kΩ	-	0.2	-	μS
		KRA311		-	0.065	-	
		KRA312		-	0.4	-	
		KRA313		-	0.1	-	
		KRA314		-	0.15	-	
	Storage Time	KRA310		-	2.0	-	
		KRA311		-	1.7	-	
		KRA312		-	3.0	-	
		KRA313		-	2.0	-	
		KRA314		-	1.5	-	
	Fall Time	KRA310		-	0.3	-	
		KRA311		-	0.3	-	
		KRA312		-	1.7	-	
		KRA313		-	0.8	-	
		KRA314		-	1.5	-	