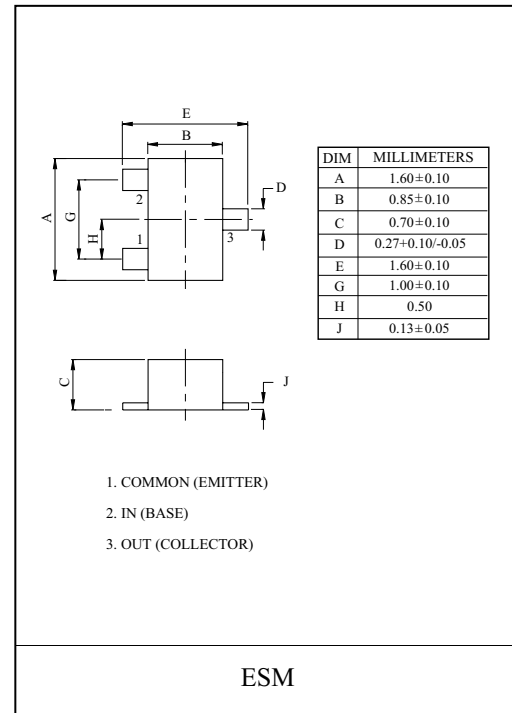
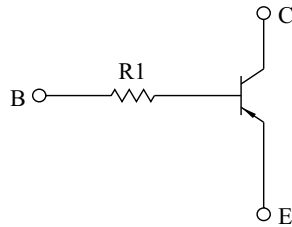


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT



MAXIMUM RATING (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

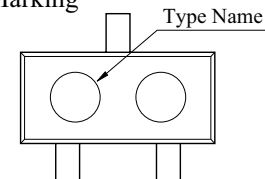
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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	KRA310E	R_1		-	4.7	-	k Ω
	KRA311E			-	10	-	
	KRA312E			-	100	-	
	KRA313E			-	22	-	
	KRA314E			-	47	-	

MARK SPEC

TYPE	KRA310E	KRA311E	KRA312E	KRA313E	KRA314E
MARK	PK	PM	PN	PO	PP

Marking

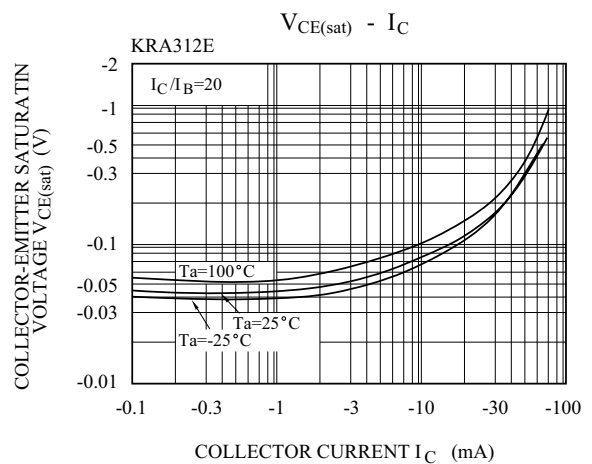
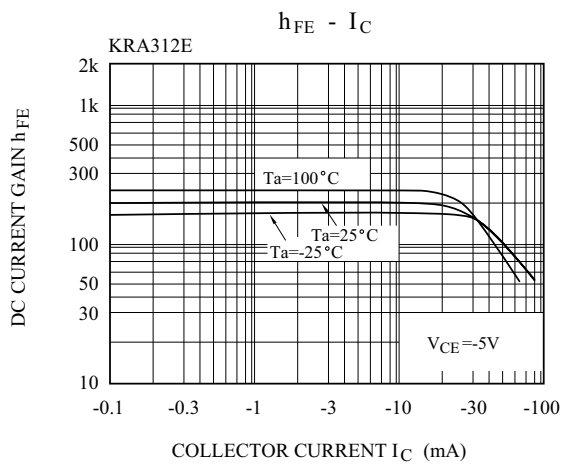
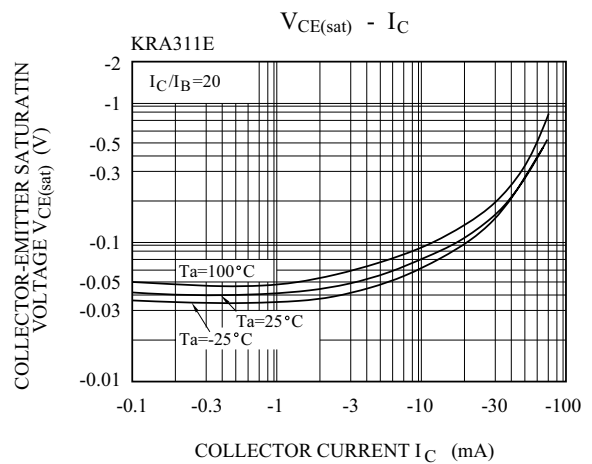
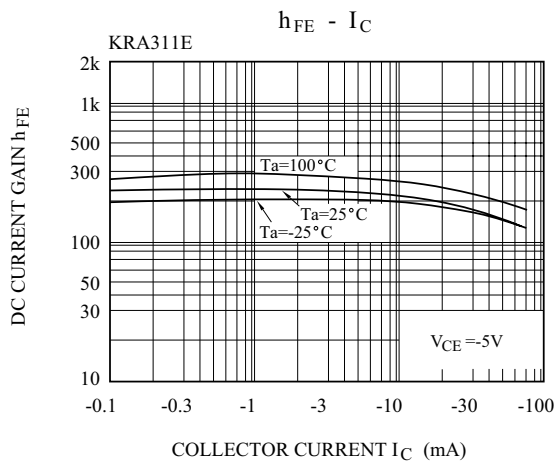
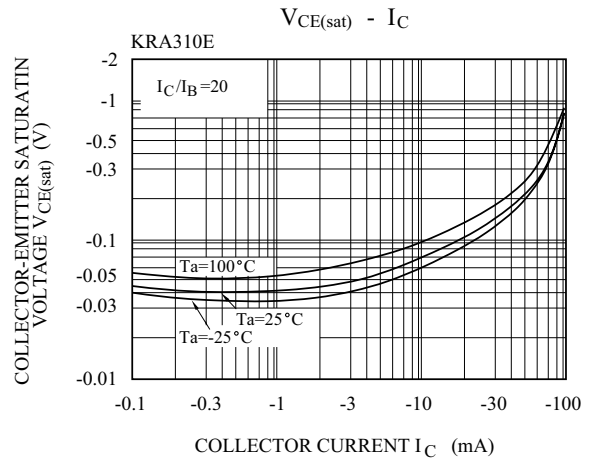
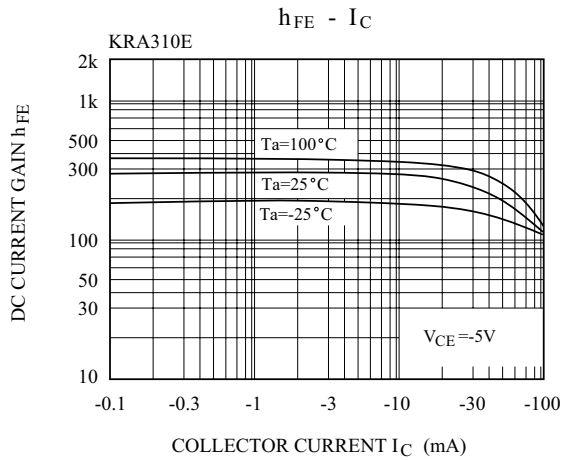


KRA310E~KRA314E

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Switching Time	Rise Time	KRA310E	V _O =-5V V _{IN} =-5V R _L =1k Ω	-	0.2	-	μS	
		KRA311E		-	0.065	-		
		KRA312E		-	0.4	-		
		KRA313E		-	0.1	-		
		KRA314E		-	0.15	-		
	Storage Time	KRA310E		t _{stg}	-	2.0		-
		KRA311E		-	-	1.7		-
		KRA312E		-	-	3.0		-
		KRA313E		-	-	2.0		-
		KRA314E		-	-	1.5		-
	Fall Time	KRA310E		t _f	-	0.3		-
		KRA311E		-	-	0.3		-
		KRA312E		-	-	1.7		-
		KRA313E		-	-	0.8		-
		KRA314E		-	-	1.5		-

KRA310E~314E



KRA310E~314E

