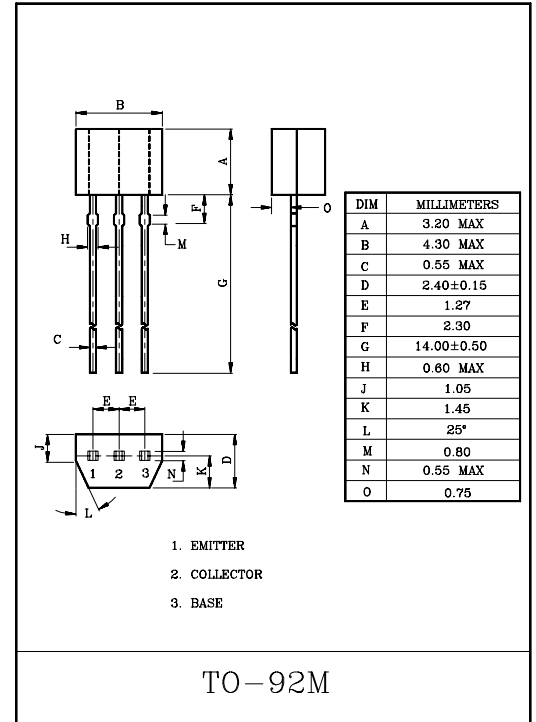
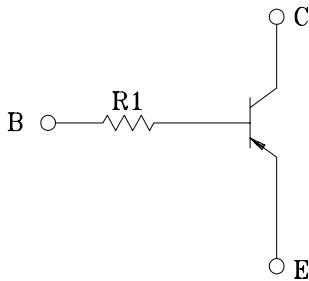


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

### FEATURES

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

### EQUIVALENT CIRCUIT



### MAXIMUM RATINGS (T<sub>a</sub>=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	-50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-50	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-100	mA
Collector Power Dissipation	P <sub>C</sub>	400	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C

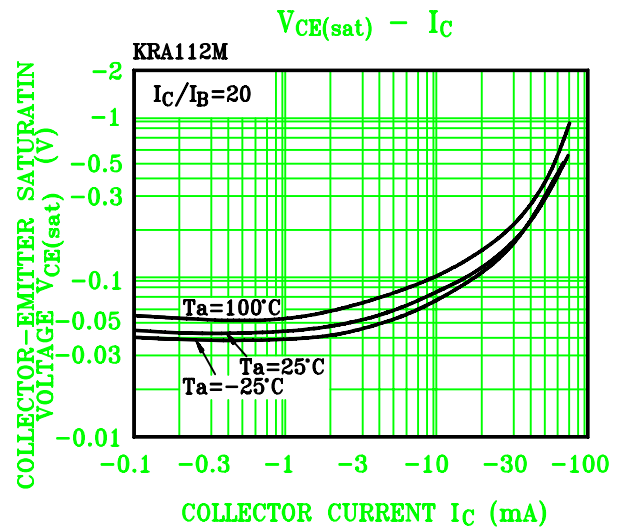
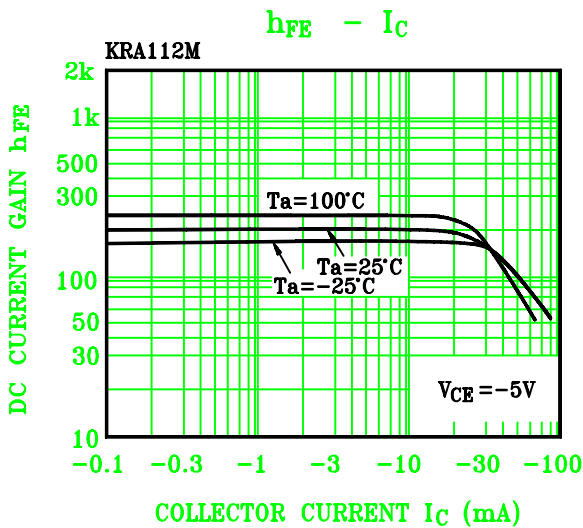
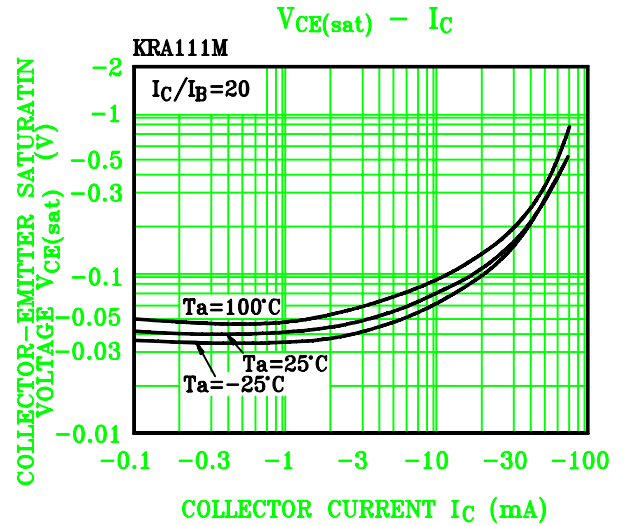
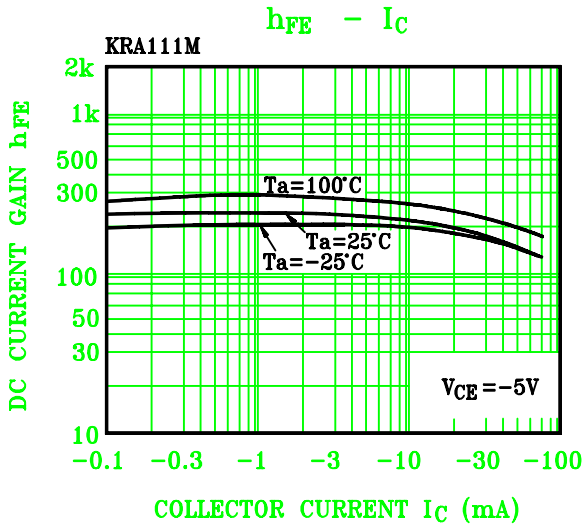
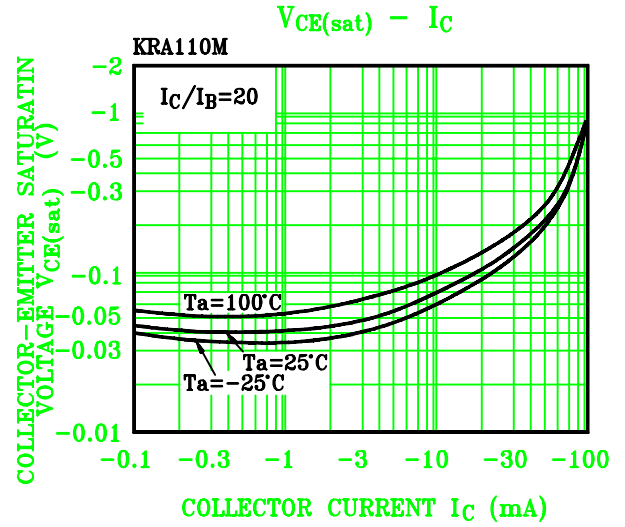
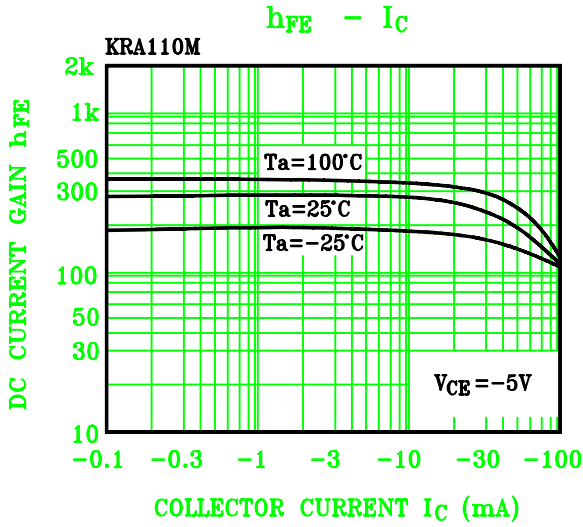
# KRA110M ~ KRA114M

## 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	KRA110M	$R_i$		-	4.7	-	k $\Omega$	
	KRA111M			-	10	-		
	KRA112M			-	100	-		
	KRA113M			-	22	-		
	KRA114M			-	47	-		
Switching Time	Rise Time	$t_r$	$V_O=-5V$ $V_{IN}=-5V$ $R_L=1k\Omega$	-	0.2	-	$\mu S$	
				KRA111M	-	0.065		-
				KRA112M	-	0.4		-
				KRA113M	-	0.1		-
				KRA114M	-	0.15		-
	Storage Time	$t_{stg}$		KRA110M	-	2.0		-
				KRA111M	-	1.7		-
				KRA112M	-	3.0		-
				KRA113M	-	2.0		-
				KRA114M	-	1.5		-
	Fall Time	$t_f$		KRA110M	-	0.3		-
				KRA111M	-	0.3		-
				KRA112M	-	1.7		-
				KRA113M	-	0.8		-
				KRA114M	-	1.5		-

Note; \* Characteristic of Transistor Only

# KRA110M~KRA114M



# KRA110M~KRA114M

