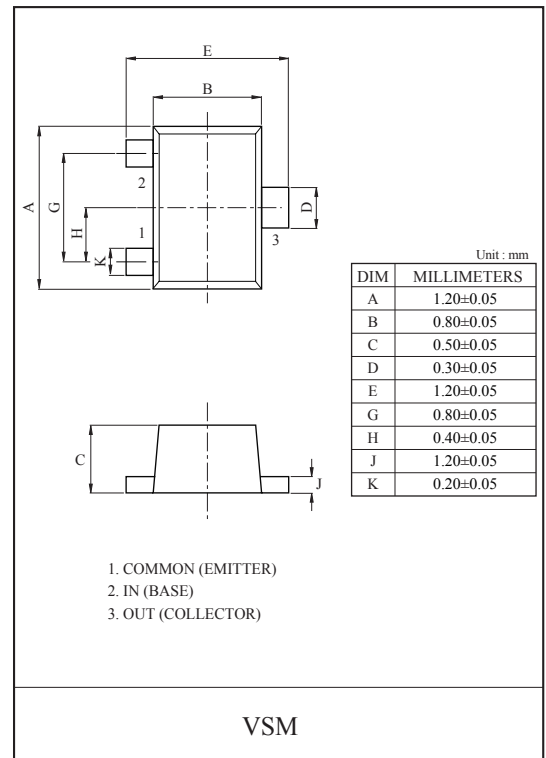
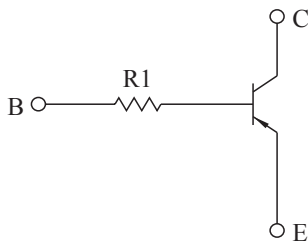


**SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.**

### FEATURES

- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Packing Density.
- Suffix U : Qualified to AEC-Q101  
ex) KRA311V-RTK/HU

### 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	$T_j$	-55 ~ 150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

### ELECTRICAL CHARACTERISTICS (Ta=25°C)

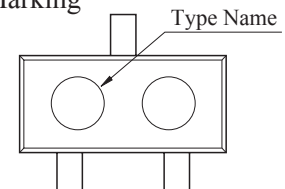
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=-50V, I_E=0$	-	-	-100	nA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=-5V, I_C=0$	-	-	-100	nA
DC Current Gain		$h_{FE}$	$V_{CE}=-5V, I_C=-1mA$	120	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$	-	-0.1	-0.3	V
Transition Frequency		$f_T^*$	$V_{CE}=-10V, I_C=-5mA$	-	250	-	MHz
Input Resistor	KRA310V	$R_1$		3.29	4.7	6.11	kΩ
	KRA311V			7	10	13	
	KRA312V			70	100	130	
	KRA313V			15.4	22	28.6	
	KRA314V			32.9	47	61.1	

Note : \* Characteristic of Transistor Only.

### MARK SPEC

TYPE	KRA310V	KRA311V	KRA312V	KRA313V	KRA314V
MARK	PK	PM	PN	PO	PP

### Marking

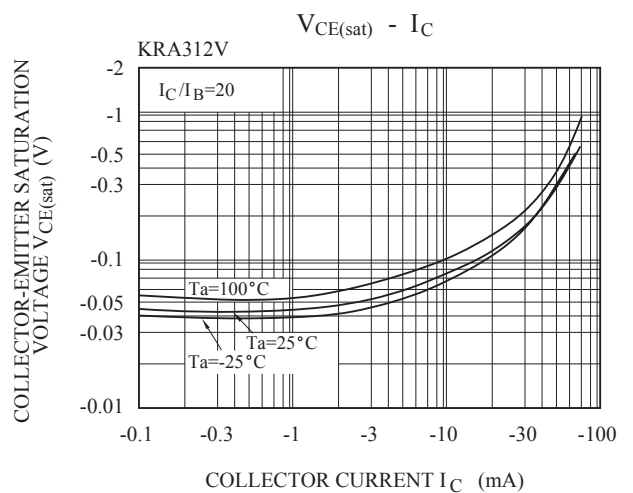
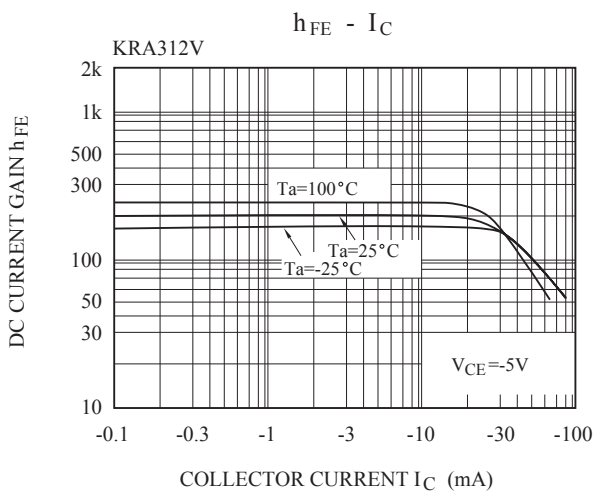
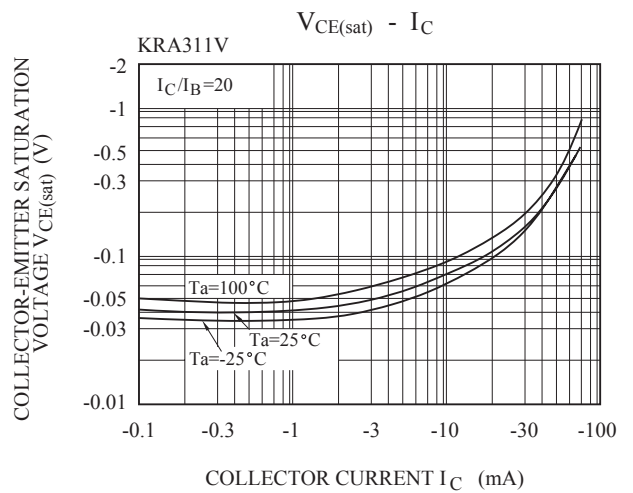
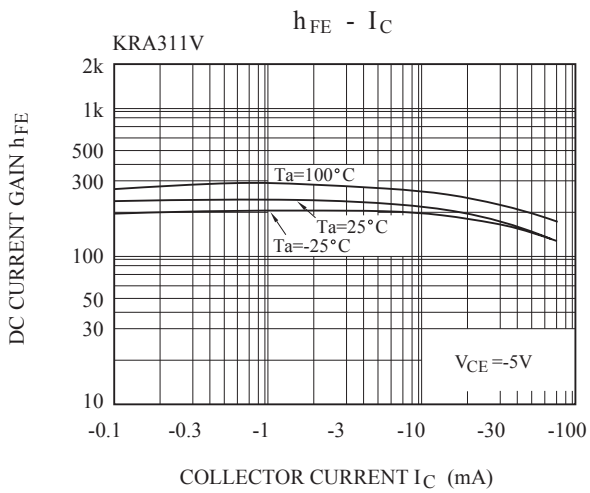
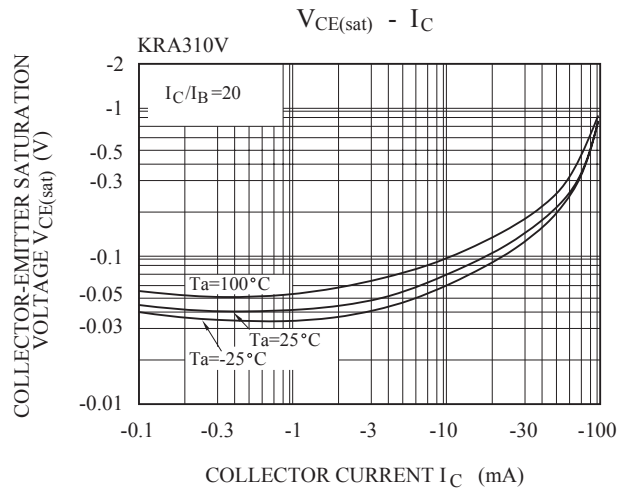
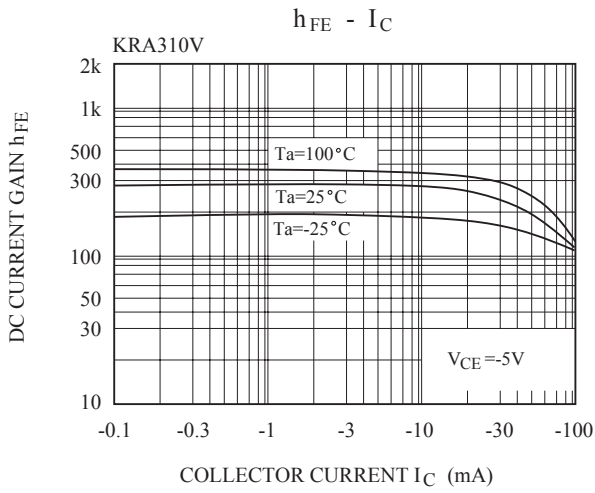


# KRA310V~KRA314V

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRA310V	$t_r$	$V_O=-5V$ $V_{IN}=-5V$ $R_L=1k\Omega$	-	0.2	-	$\mu S$
		KRA311V			-	0.065	-	
		KRA312V			-	0.4	-	
		KRA313V			-	0.1	-	
		KRA314V			-	0.15	-	
	Storage Time	KRA310V	$t_{stg}$		-	2.0	-	
		KRA311V			-	1.7	-	
		KRA312V			-	3.0	-	
		KRA313V			-	2.0	-	
		KRA314V			-	1.5	-	
	Fall Time	KRA310V	$t_f$		-	0.3	-	
		KRA311V			-	0.3	-	
		KRA312V			-	1.7	-	
		KRA313V			-	0.8	-	
		KRA314V			-	1.5	-	

# KRA310V~KRA314V



# KRA310V~KRA314V

