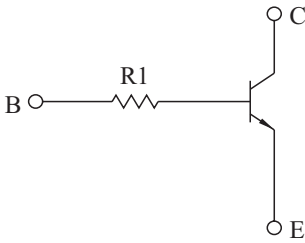


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

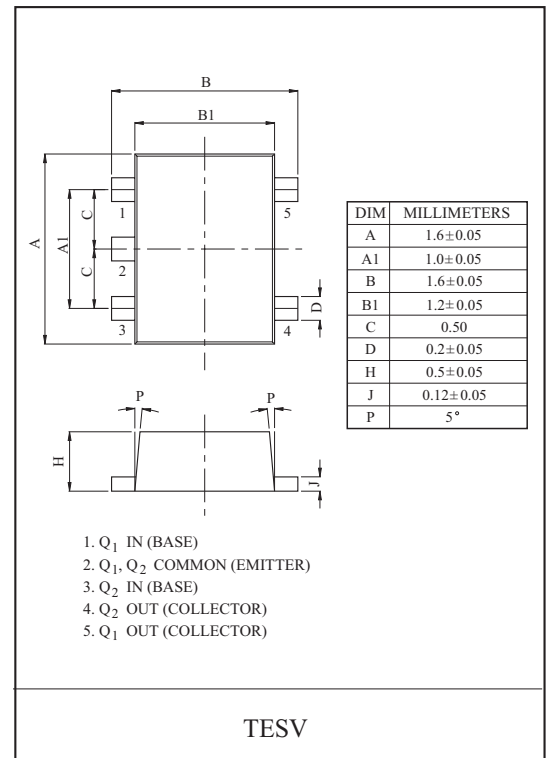
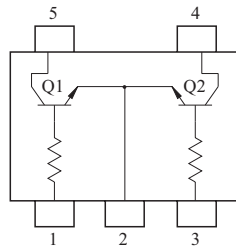
### FEATURES

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

### EQUIVALENT CIRCUIT



### EQUIVALENT CIRCUIT (TOP VIEW)



### MAXIMUM RATING (Ta=25 )

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Power Dissipation	P <sub>C</sub> *	200	mW
Junction Temperature	T <sub>J</sub>	150	
Storage Temperature Range	T <sub>stg</sub>	-55 150	

\* Total Rating.

### ELECTRICAL CHARACTERISTICS (Ta=25 )

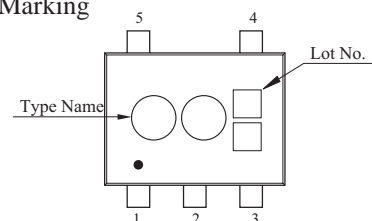
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =50V, I <sub>E</sub> =0	-	-	100	nA	
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0	-	-	100	nA	
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	120	-	-		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA	-	0.1	0.3	V	
Transition Frequency	f <sub>T</sub> *	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	-	250	-	MHz	
Input Resistor	KRC660E	R <sub>1</sub>		3.29	4.7	6.11	k
	KRC661E			7	10	13	
	KRC662E			70	100	130	
	KRC663E			15.4	22	28.6	
	KRC664E			32.9	47	61.1	

Note : \* Characteristic of Transistor Only.

### MARK SPEC

TYPE	KRC660E	KRC661E	KRC662E	KRC663E	KRC664E
MARK	NK	NM	NN	NO	NP

### Marking

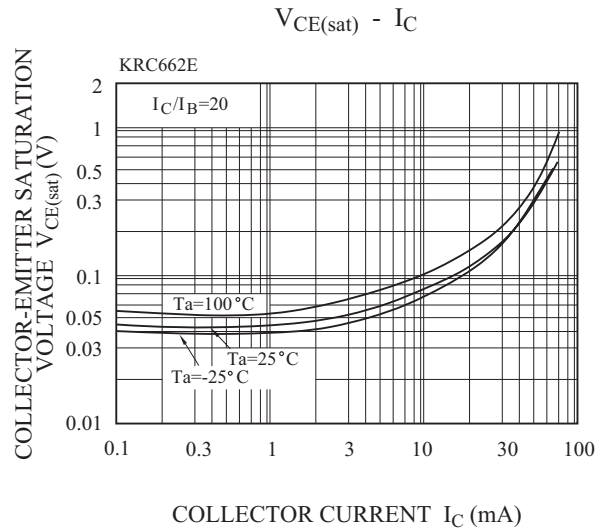
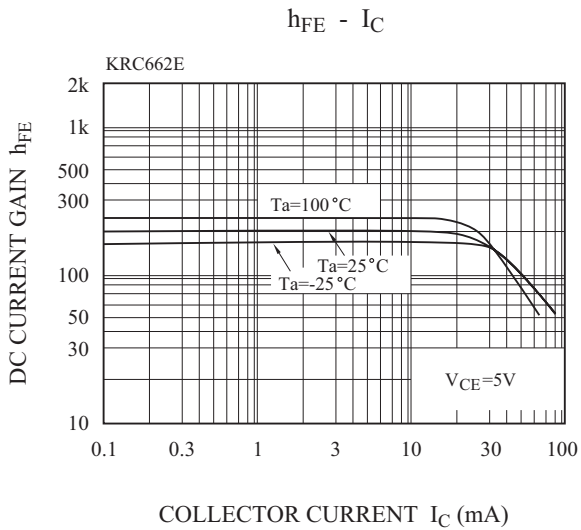
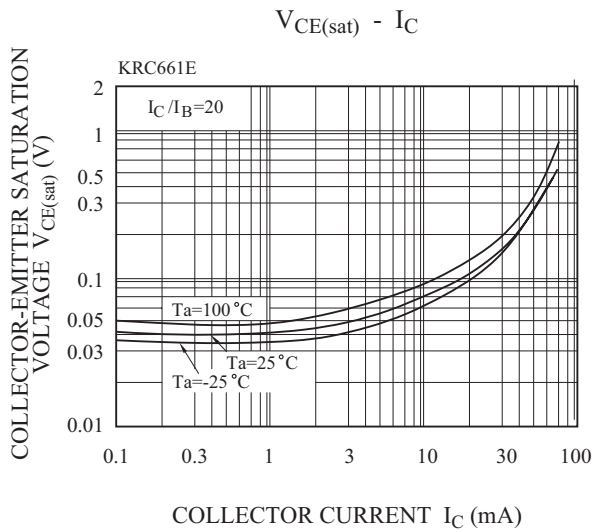
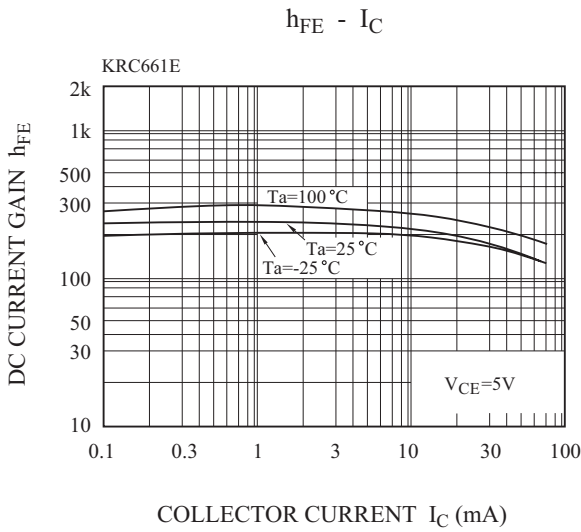
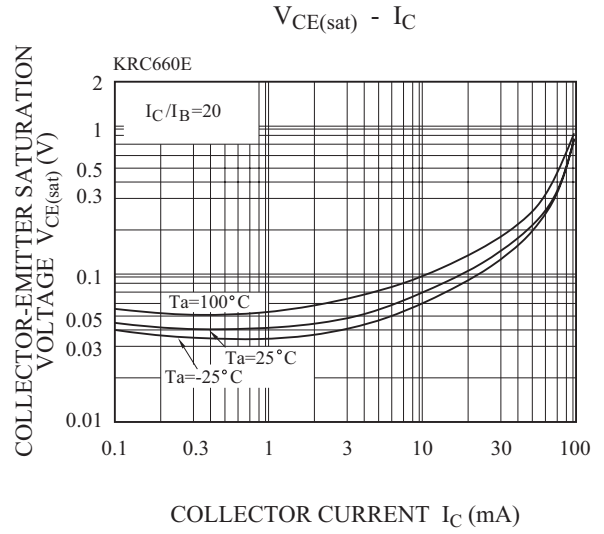
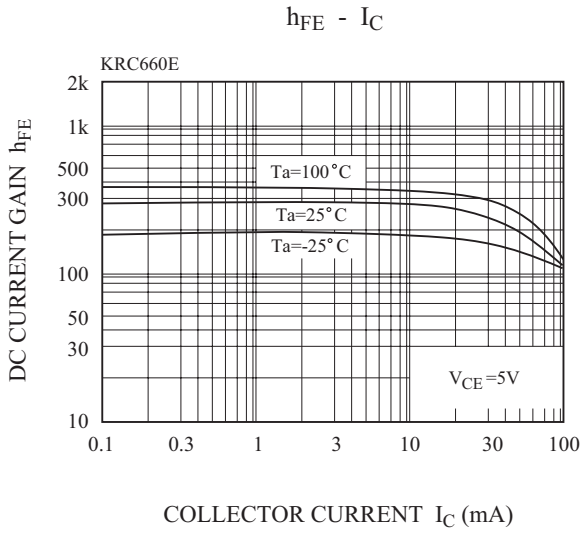


# KRC660E~KRC664E

## ELECTRICAL CHARACTERISTICS (Ta=25 )

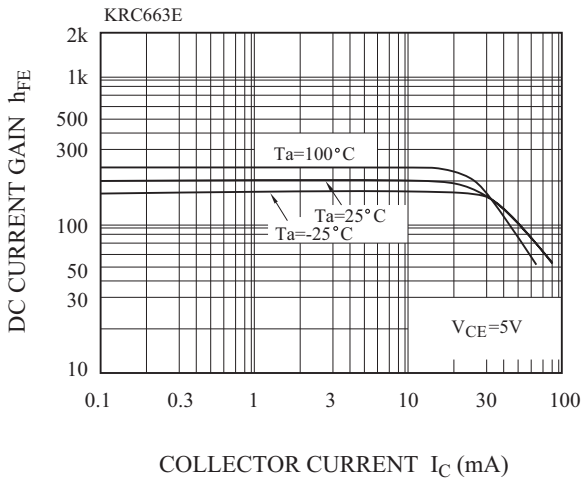
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC660E	$t_r$	$V_O=5V$ $V_{IN}=5V$ $R_L=1k$	-	0.025	-	$\mu s$
		KRC661E			-	0.03	-	
		KRC662E			-	0.3	-	
		KRC663E			-	0.06	-	
		KRC664E			-	0.11	-	
	Storage Time	KRC660E	$t_{stg}$		-	3.0	-	
		KRC661E			-	2.0	-	
		KRC662E			-	6.0	-	
		KRC663E			-	4.0	-	
		KRC664E			-	5.0	-	
	Fall Time	KRC660E	$t_f$		-	0.2	-	
		KRC661E			-	0.12	-	
		KRC662E			-	2.0	-	
		KRC663E			-	0.9	-	
		KRC664E			-	1.4	-	

# KRC660E~KRC664E

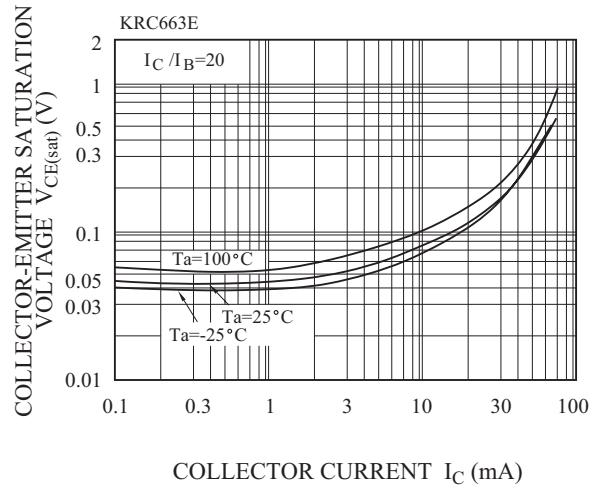


# KRC660E~KRC664E

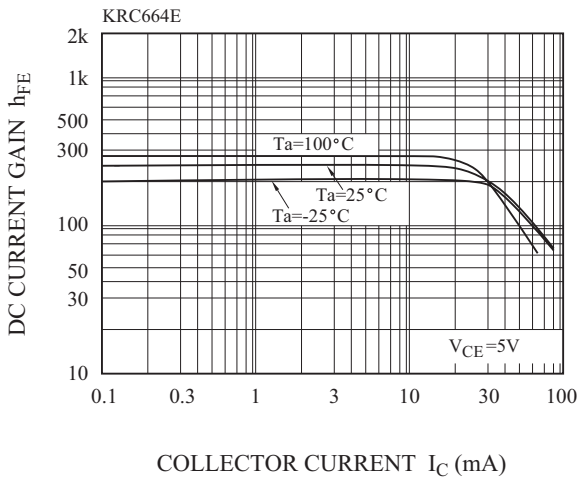
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$V_{CE(sat)} - I_C$

