KRC110~KRC114

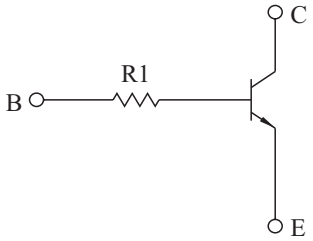
EPITAXIAL PLANAR NPN TRANSISTOR

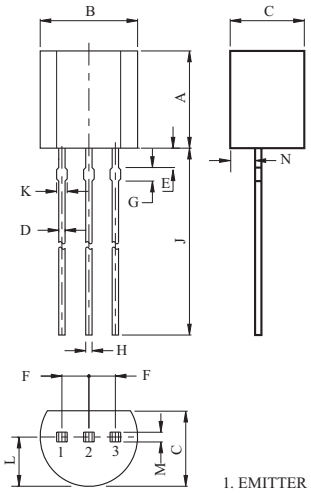
SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT





DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00 ±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

1. EMITTER
2. COLLECTOR
3. BASE

TO-92

MAXIMUM RATING (Ta=25℃)

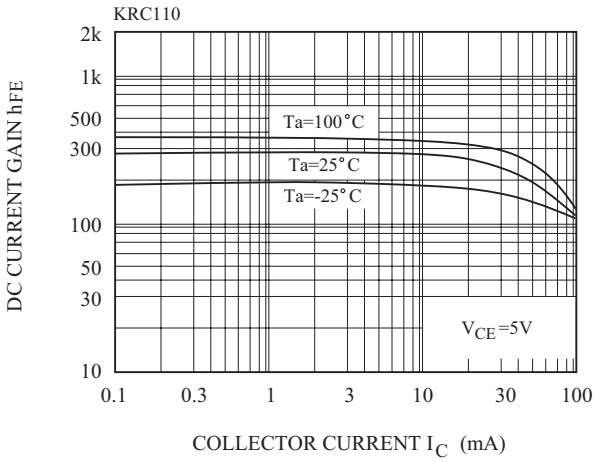
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

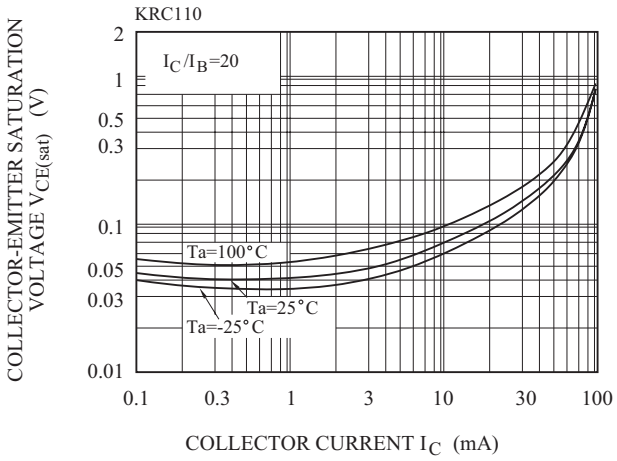
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current			I_{CBO}	V_{CB}=50V, I_E=0	-	-	100	nA
Emitter Cut-off Current			I_{EBO}	V_{EB}=5V, I_C=0	-	-	100	nA
DC Current Gain			h_{FE}	V_{CE}=5V, I_C=1mA	120	-	-	
Collector-Emitter Saturation Voltage			$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA	-	0.1	0.3	V
Transition Frequency			f_T *	V_{CE}=10V, I_C=5mA	-	250	-	MHz
Switching Time	Rise Time	KRC110	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.025	-	μS
		KRC111			-	0.03	-	
		KRC112			-	0.3	-	
		KRC113			-	0.06	-	
		KRC114			-	0.11	-	
	Storage Time	KRC110	t_{stg}		-	3.0	-	
		KRC111			-	2.0	-	
		KRC112			-	6.0	-	
		KRC113			-	4.0	-	
		KRC114			-	5.0	-	
	Fall Time	KRC110	t_f		-	0.2	-	
		KRC111			-	0.12	-	
		KRC112			-	2.0	-	
		KRC113			-	0.9	-	
		KRC114			-	1.4	-	
Input Resistor		KRC110	R_1	-	3.29	4.7	6.11	kΩ
		KRC111			7	10	13	
		KRC112			70	100	130	
		KRC113			15.4	22	28.6	
		KRC114			32.9	47	61.1	

Note : * Characteristic of Transistor Only.

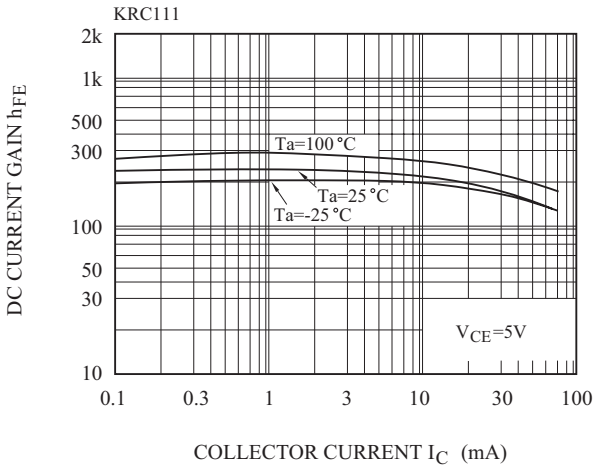
h_{FE} - I_C



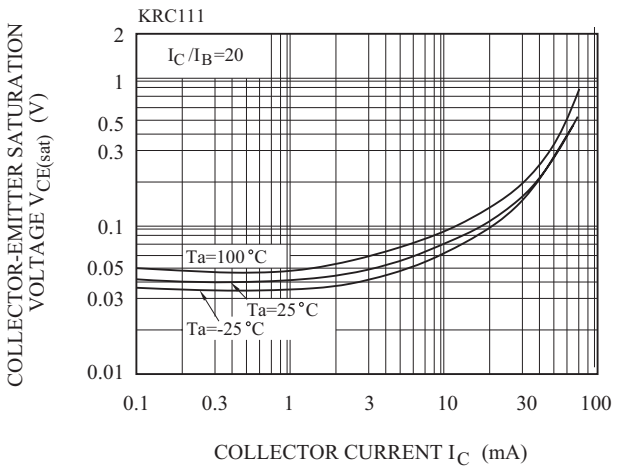
$V_{CE(sat)}$ - I_C



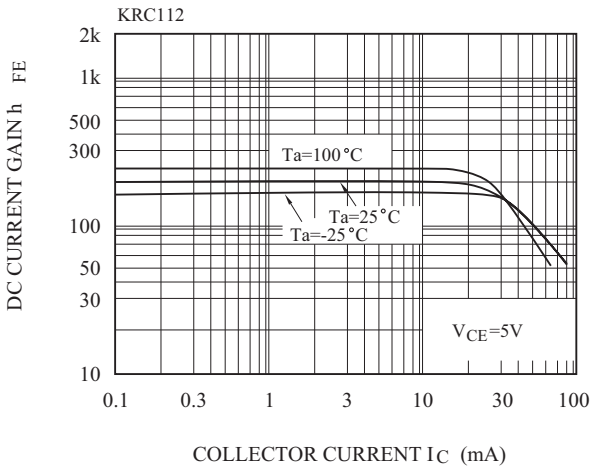
h_{FE} - I_C



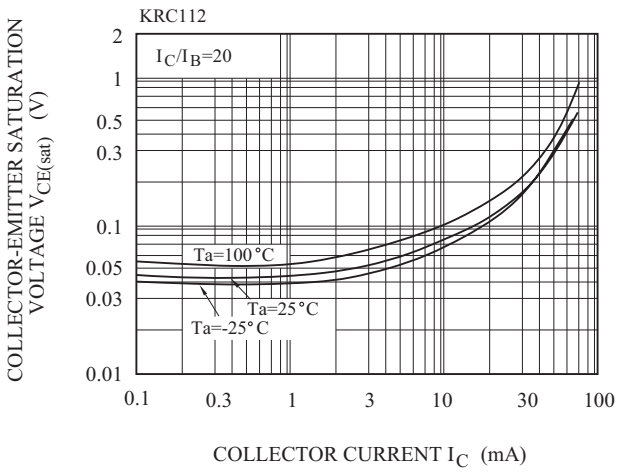
$V_{CE(sat)}$ - I_C



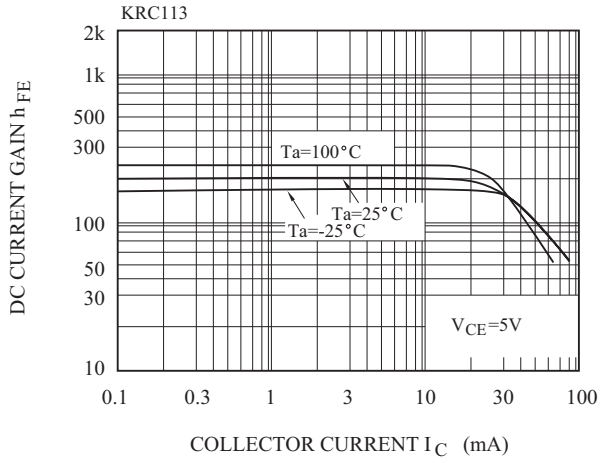
h_{FE} - I_C



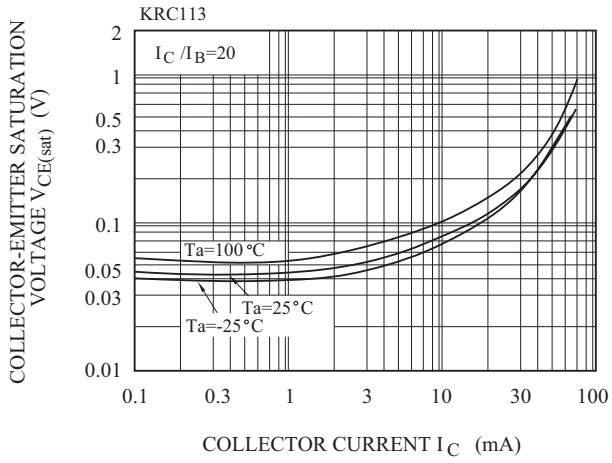
$V_{CE(sat)}$ - I_C



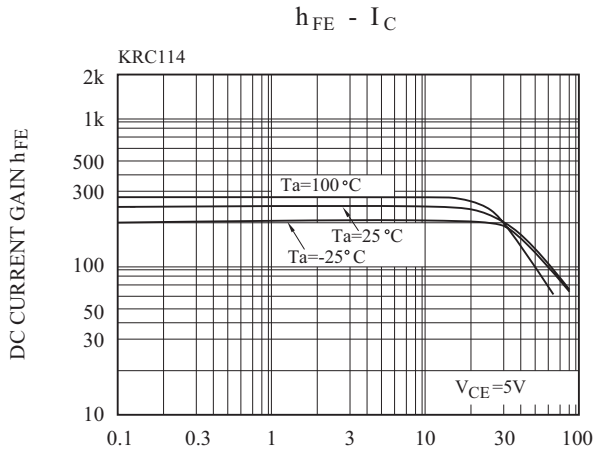
h_{FE} - I_C



$V_{CE(sat)}$ - I_C



h_{FE} - I_C



$V_{CE(sat)}$ - I_C