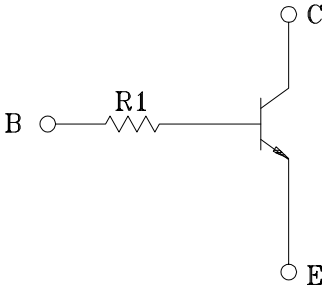
KRC110M~ KRC114M

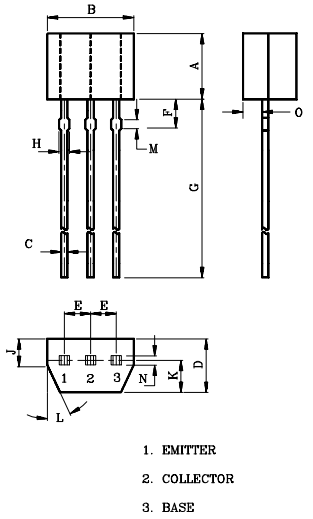
EPITAXIAL PLANAR NPN TRANSISTOR

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	3.20 MAX
B	4.30 MAX
C	0.55 MAX
D	2.40±0.15
E	1.27
F	2.30
G	14.00±0.50
H	0.60 MAX
J	1.05
K	1.45
L	25°
M	0.80
N	0.55 MAX
O	0.75

1. EMITTER
2. COLLECTOR
3. BASE

TO-92M

MAXIMUM RATINGS (Ta=25℃)

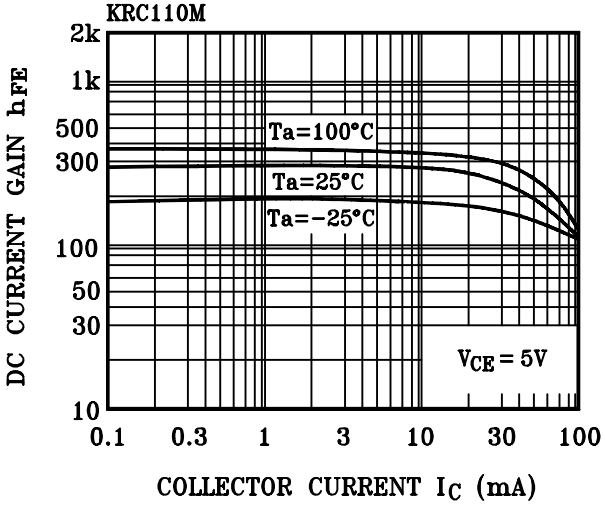
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS(Ta=25℃)

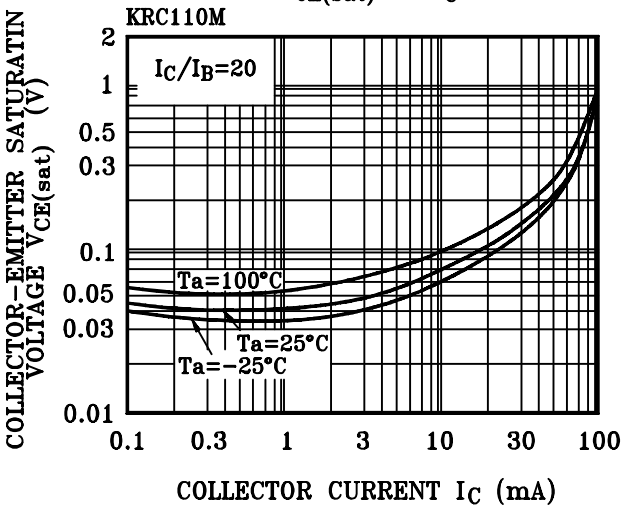
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current			I_{CBO}	V_{CB}=50V, I_E=0	-	-	100	nA
Emitter Cut-off Current			I_{EBO}	V_{EB}=5V, I_C=0	-	-	100	nA
DC Current Gain			h_{FE}	V_{CE}=5V, I_C=1mA	120	-	-	
Collector-Emitter Saturation Voltage			$V_{CE(sat)}$	I_C=10mA, I_B=0.5mA	-	0.1	0.3	V
Transition Frequency			f_T *	V_{CE}=10V, I_C=5mA	-	250	-	MHz
Input Resistor		KRC110M	R_1		-	4.7	-	kΩ
		KRC111M			-	10	-	
		KRC112M			-	100	-	
		KRC113M			-	22	-	
		KRC114M			-	47	-	
Switching Time	Rise Time	KRC110M	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.025	-	μS
		KRC111M			-	0.03	-	
		KRC112M			-	0.3	-	
		KRC113M			-	0.06	-	
		KRC114M			-	0.11		
	Storage Time	KRC110M	t_{stg}		-	3.0	-	
		KRC111M			-	2.0	-	
		KRC112M			-	6.0	-	
		KRC113M			-	4.0	-	
		KRC114M			-	5.0	-	
	Fall Time	KRC110M	t_f		-	0.2	-	
		KRC111M			-	0.12	-	
		KRC112M			-	2.0	-	
		KRC113M			-	0.9	-	
		KRC114M			-	1.4	-	

Note : *Characteristic of Trnsistor Only

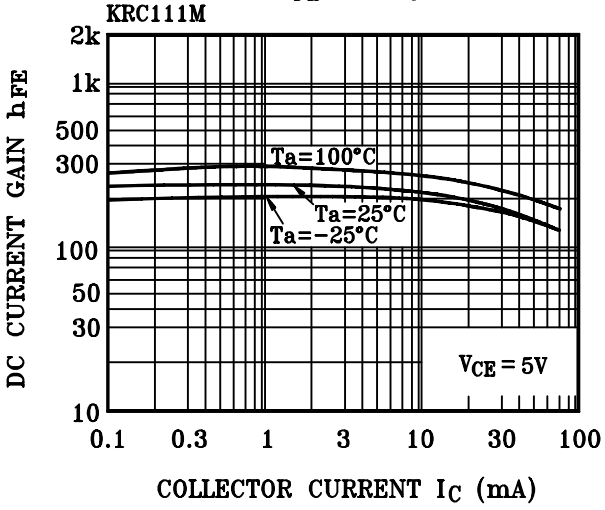
h_{FE} - I_C



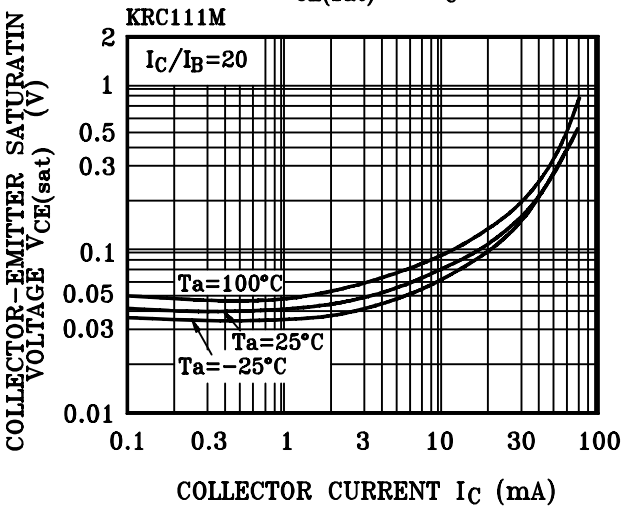
$V_{CE(sat)}$ - I_C



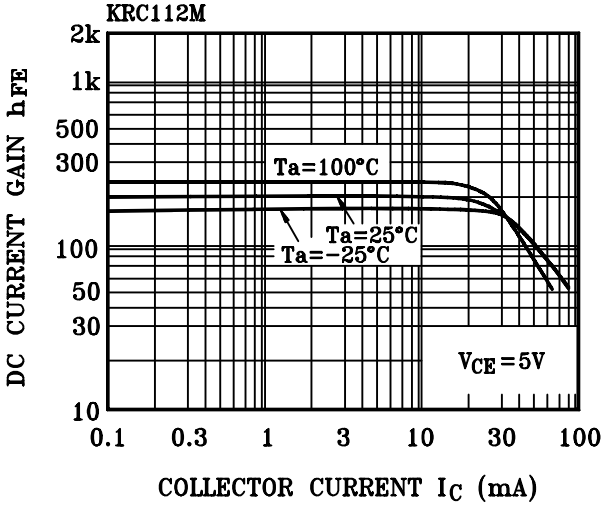
h_{FE} - I_C



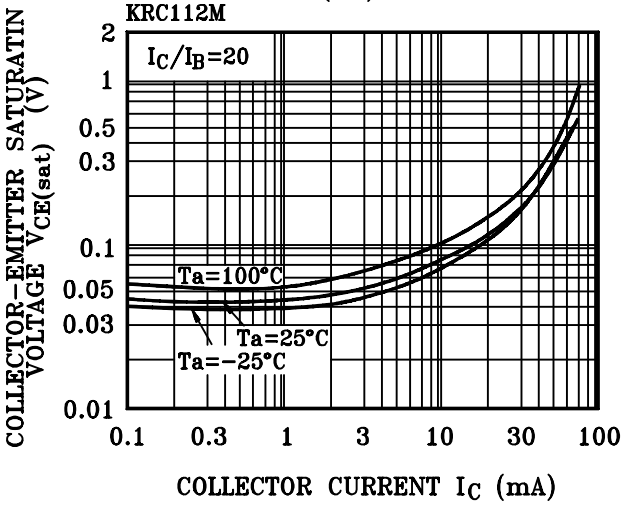
$V_{CE(sat)}$ - I_C



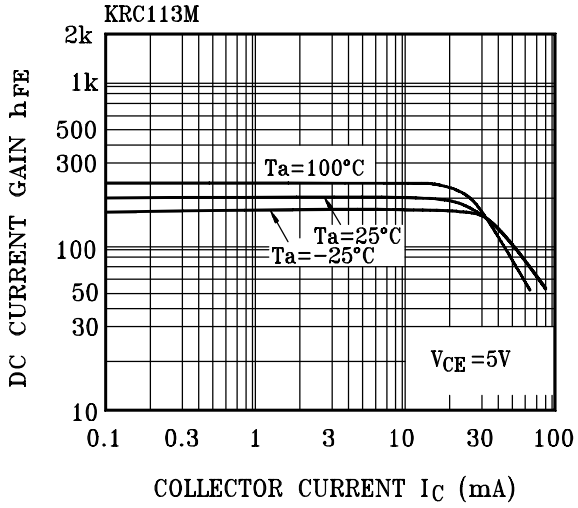
h_{FE} - I_C



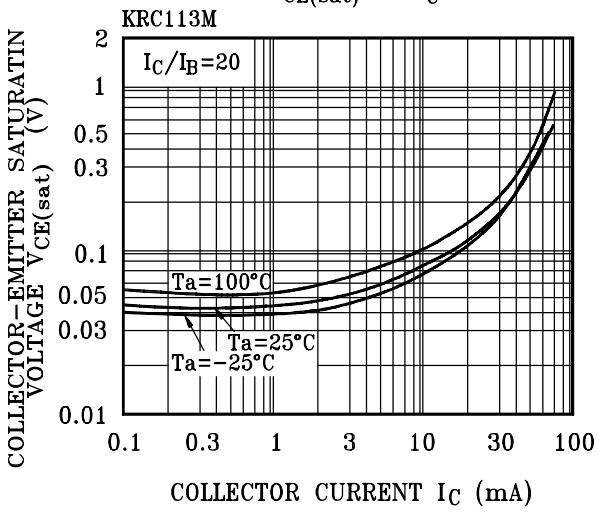
$V_{CE(sat)}$ - I_C



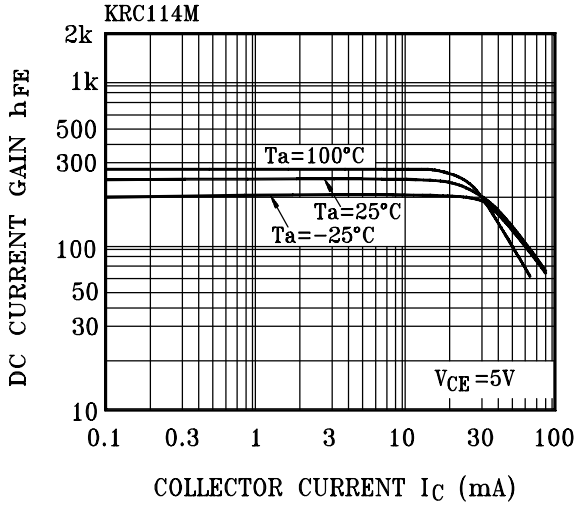
h_{FE} - I_C



$V_{CE(sat)}$ - I_C



h_{FE} - I_C



$V_{CE(sat)}$ - I_C