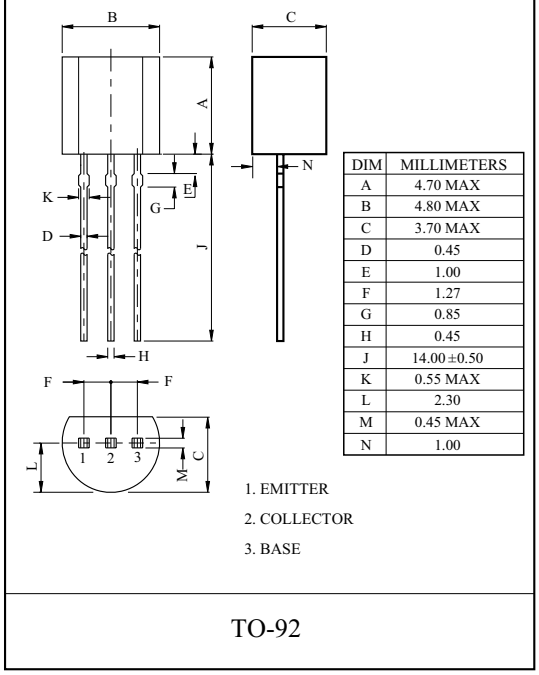
KRC107~KRC109

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

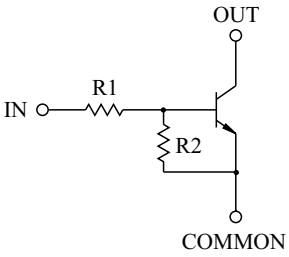


DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

1. EMITTER
2. COLLECTOR
3. BASE

TO-92

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC107	10	47
KRC108	22	47
KRC109	47	22

MAXIMUM RATING (Ta=25℃)

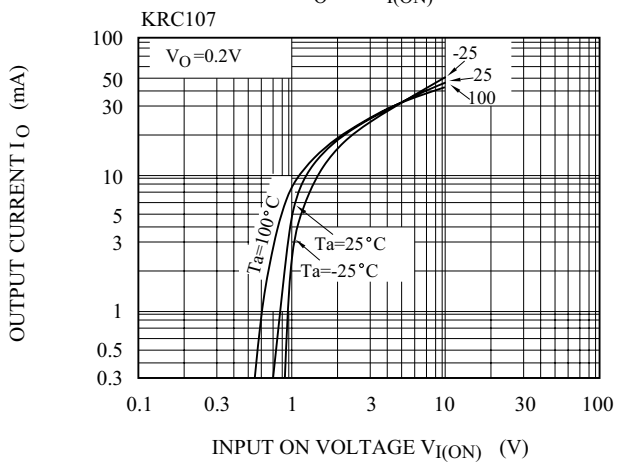
CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC107 109	V_O	50	V
Input Voltage	KRC107	V_I	30, -6	V
	KRC108		40, -7	
	KRC109		40, -15	
Output Current	KRC107 109	I_O	100	mA
Power Dissipation		P_D	625	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

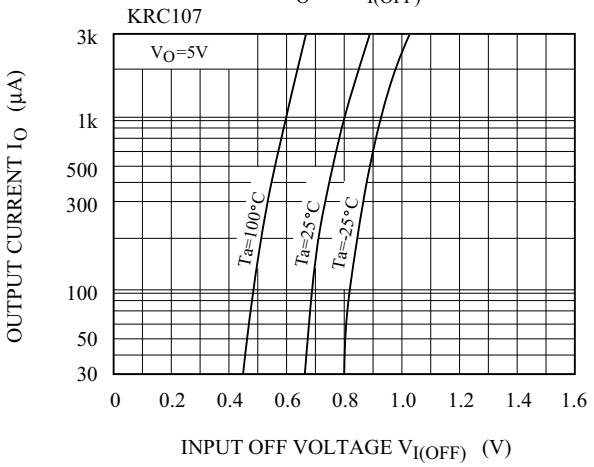
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current		KRC107 109	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain		KRC107	G_I	V_O=5V, I_O=10mA	80	150	-	
		KRC108			80	150	-	
		KRC109			70	140	-	
Output Voltage		KRC107 109	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)		KRC107	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.2	1.8	V
		KRC108			-	1.8	2.6	
		KRC109			-	3.0	5.8	
Input Votlage (OFF)		KRC107	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	0.5	0.75	-	V
		KRC108			0.6	0.88	-	
		KRC109			1.5	1.82	-	
Transition Frequency		KRC107 109	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current		KRC107	I_I	V_I=5V	-	-	0.88	mA
		KRC108			-	-	0.36	
		KRC109			-	-	0.16	
Switching Time	Rise Time	KRC107	t_r	V_O=5V, V_{IN}=5V R_L=1kΩ	-	0.05	-	μs
		KRC108			-	0.12	-	
		KRC109			-	0.26	-	
	Storage Time	KRC107	t_{stg}		-	2.0	-	
		KRC108			-	2.4	-	
		KRC109			-	1.5	-	
	Fall Time	KRC107	t_f		-	0.36	-	
		KRC108			-	0.4	-	
		KRC109			-	0.41	-	
Input Resistor		KRA107	R1	-	7	10	13	kΩ
		KRA108			15.4	22	28.6	
		KRA109			32.9	47	61.1	

Note : * Characteristic of Transistor Only.

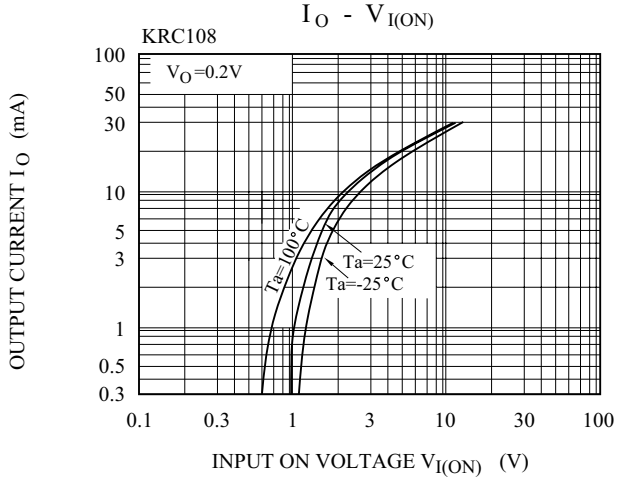
I_O - $V_{I(ON)}$



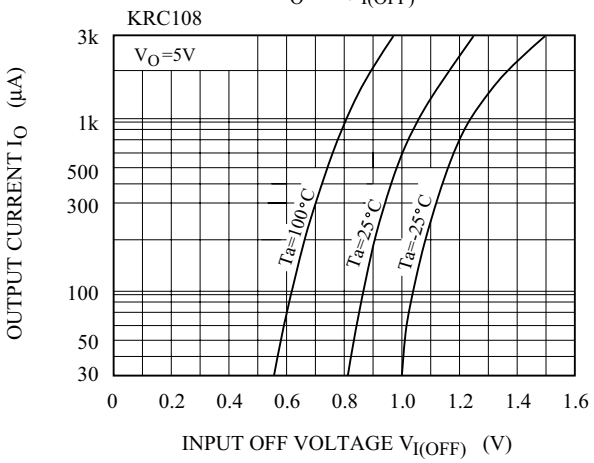
I_O - $V_{I(OFF)}$



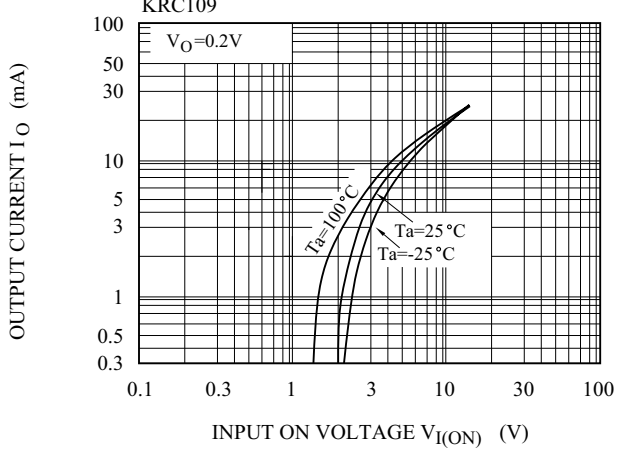
I_O - $V_{I(ON)}$



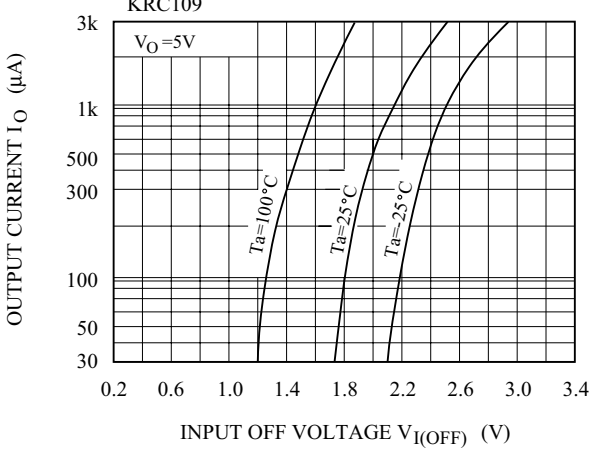
I_O - $V_{I(OFF)}$



I_O - $V_{I(ON)}$

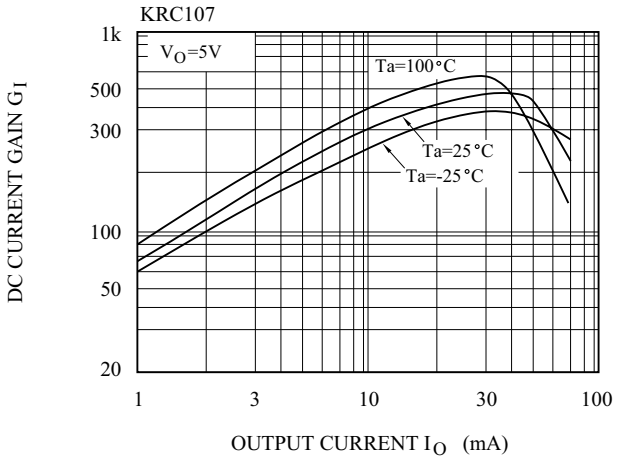


I_O - $V_{I(OFF)}$



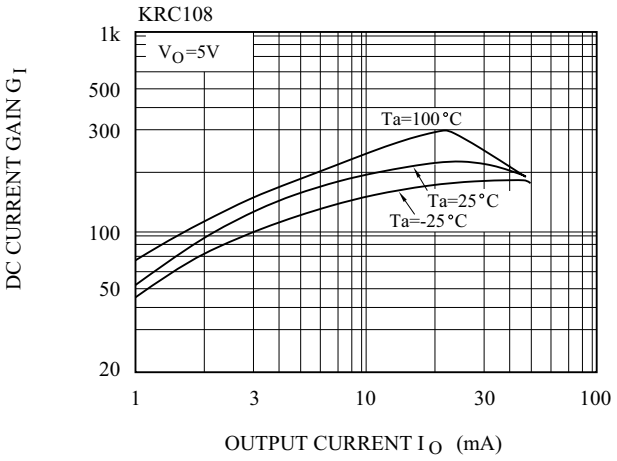
G_I - I_O

KRC107



G_I - I_O

KRC108



G_I - I_O

KRC109