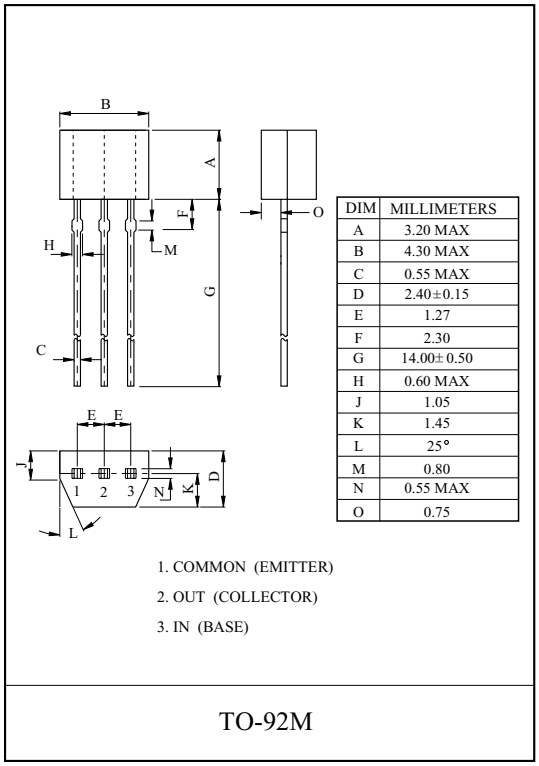
SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

FEATURES

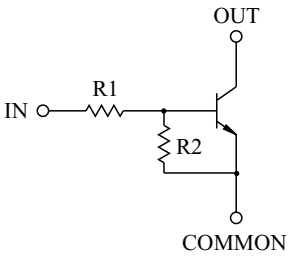
· With Built-in Bias Resistors.
· Simplify Circuit Design.
· Reduce a Quantity of Parts and Manufacturing Process.



DIM	MILLIMETERS
A	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

TO-92M

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC116M	1	10
KRC117M	2.2	2.2
KRC118M	2.2	10
KRC119M	4.7	10
KRC120M	10	4.7
KRC121M	47	10
KRC122M	100	100

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC116M ~ 122M	V_O	50	V
Input Voltage	KRC116M	V_I	10, -5	V
	KRC117M		12, -10	
	KRC118M		12, -5	
	KRC119M		20, -7	
	KRC120M		30, -10	
	KRC121M		40, -15	
	KRC122M		40, -10	
Output Current	KRC116M ~ 122M	I_O	100	mA
Power Dissipation		P_D	400	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

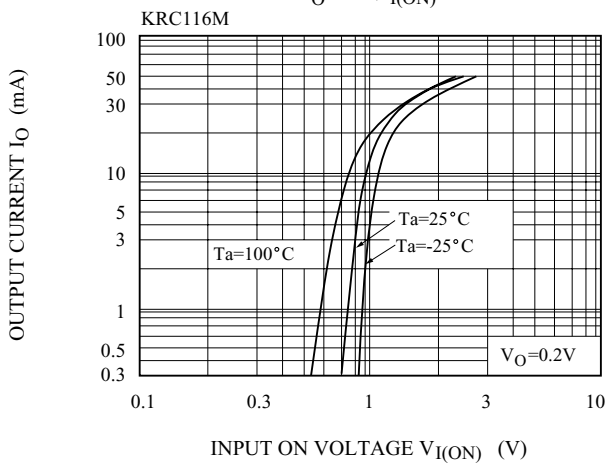
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC116M ~122M	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC116M	G_I	V_O=5V, I_O=5mA	33	-	-	
	KRC117M		V_O=5V, I_O=20mA	20	-	-	
	KRC118M		V_O=5V, I_O=10mA	33	-	-	
	KRC119M		V_O=5V, I_O=10mA	30	-	-	
	KRC120M		V_O=5V, I_O=10mA	24	-	-	
	KRC121M		V_O=5V, I_O=5mA	33	-	-	
	KRC122M		V_O=5V, I_O=5mA	62	-	-	
Output Voltage	KRC116M	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	-	0.3	V
	KRC117M		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC118M		I_O=10mA, I_I=0.5mA	-	-	0.3	
	KRC119M		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC120M		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC121M		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC122M		I_O=5mA, I_I=0.25mA	-	0.1	0.3	
Input Voltage (ON)	KRC116M	$V_{I(ON)}$	V_O=0.3V, I_O=20mA	-	0.98	3	V
	KRC117M		V_O=0.3V, I_O=20mA	-	1.83	3	
	KRC118M		V_O=0.3V, I_O=20mA	-	1.22	3	
	KRC119M		V_O=0.3V, I_O=20mA	-	1.76	2.5	
	KRC120M		V_O=0.3V, I_O=2mA	-	2	3	
	KRC121M		V_O=0.3V, I_O=2mA	-	3.9	5	
	KRC122M		V_O=0.3V, I_O=1mA	-	1.64	3	
Input Voltage (OFF)	KRC116M	$V_{I(OFF)}$	V_{CC}=5V, I_O=100μA	0.3	0.63	-	V
	KRC117M			0.5	1.15	-	
	KRC118M			0.3	0.67	-	
	KRC119M			0.3	0.82	-	
	KRC120M			0.8	1.68	-	
	KRC121M			1	3.09	-	
	KRC122M			0.5	1.17	-	
Transition Frequency	KRC116M ~122M	f_T*	V_O=10V, I_O=5mA	-	250	-	MHz
Input Current	KRC116M	I_I	V_I=5V	-	-	7.2	mA
	KRC117M			-	-	3.8	
	KRC118M			-	-	3.8	
	KRC119M			-	-	1.8	
	KRC120M			-	-	0.88	
	KRC121M			-	-	0.16	
	KRC122M			-	-	0.15	

Note : * Characteristic of Transistor Only.

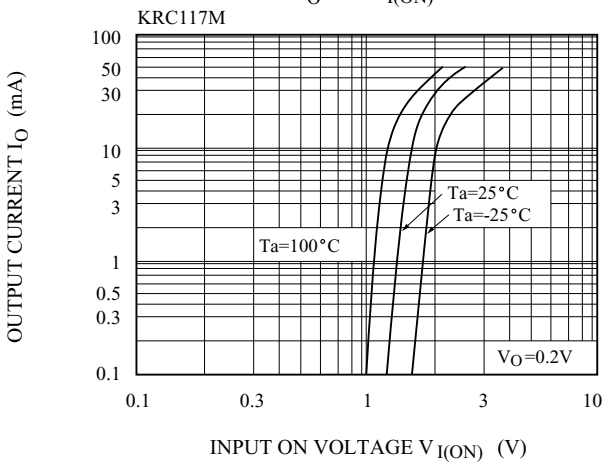
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC116M	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.01	-	μS
		KRC117M			-	0.03	-	
		KRC118M			-	0.02	-	
		KRC119M			-	0.05	-	
		KRC120M			-	0.12	-	
		KRC121M			-	0.30	-	
		KRC122M			-	0.35	-	
	Storage Time	KRC116M	t_{stg}		-	3	-	
		KRC117M			-	2	-	
		KRC118M			-	3	-	
		KRC119M			-	3	-	
		KRC120M			-	2	-	
		KRC121M			-	2	-	
		KRC122M			-	2	-	
	Fall Time	KRC116M	t_f		-	0.1	-	
		KRC117M			-	0.19	-	
		KRC118M			-	0.1	-	
		KRC119M			-	0.36	-	
		KRC120M			-	0.35	-	
		KRC121M			-	0.5	-	
		KRC122M			-	0.7	-	

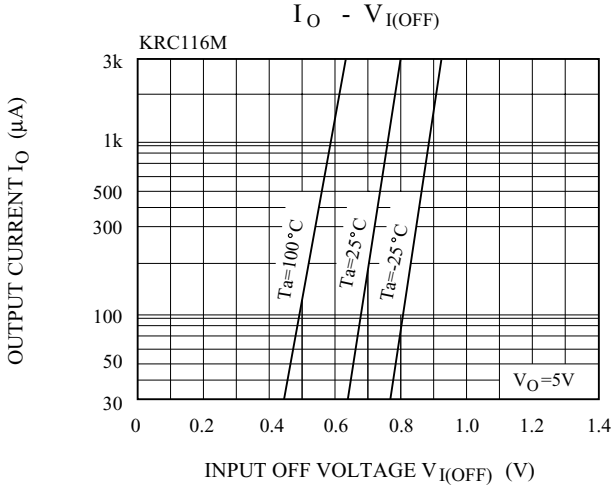
I_O - $V_{I(ON)}$



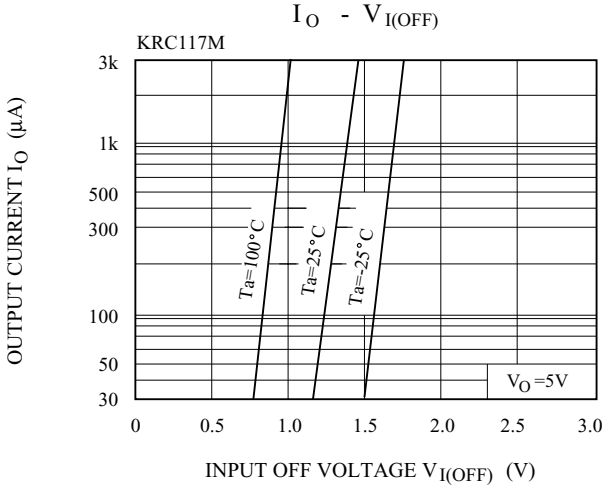
I_O - $V_{I(ON)}$



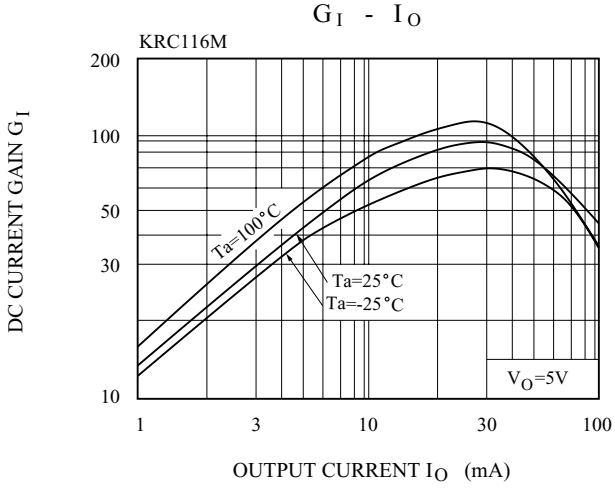
I_O - $V_{I(OFF)}$



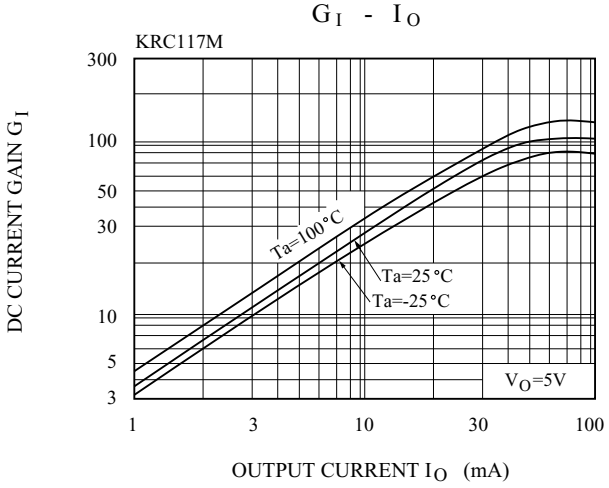
I_O - $V_{I(OFF)}$



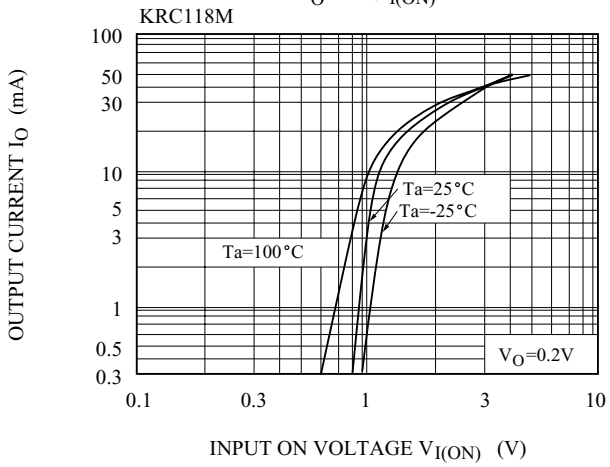
G_I - I_O



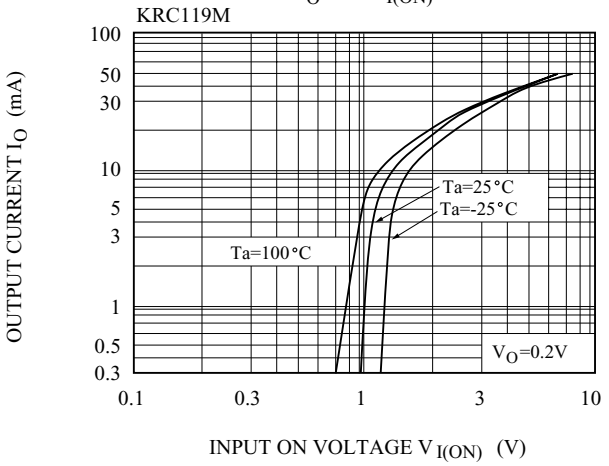
G_I - I_O



I_O - $V_{I(ON)}$



I_O - $V_{I(ON)}$



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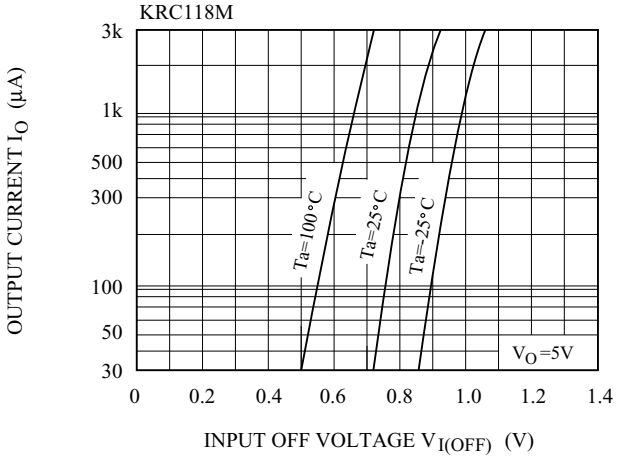
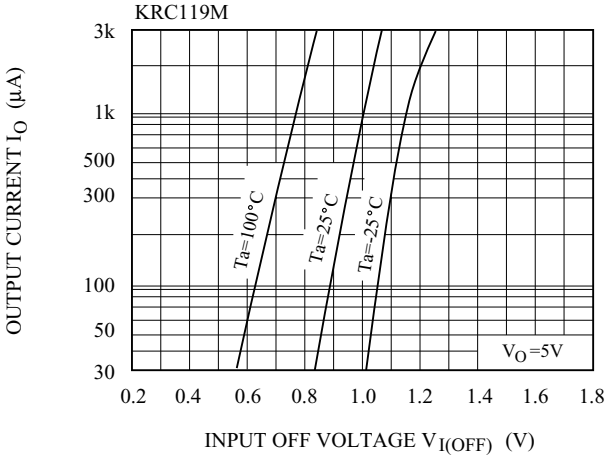
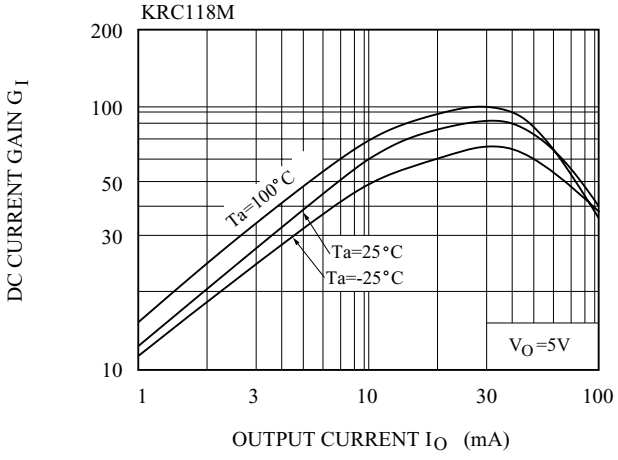


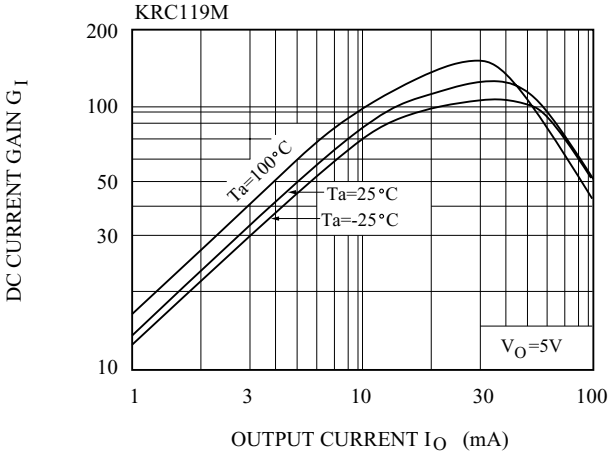
I_O - $V_{I(OFF)}$



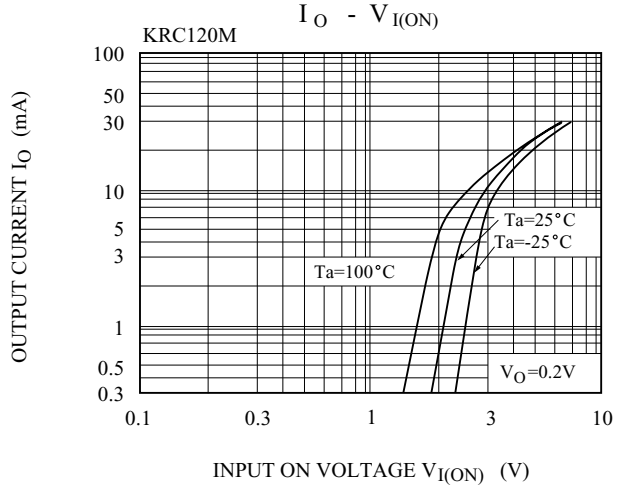
G_I - I_O



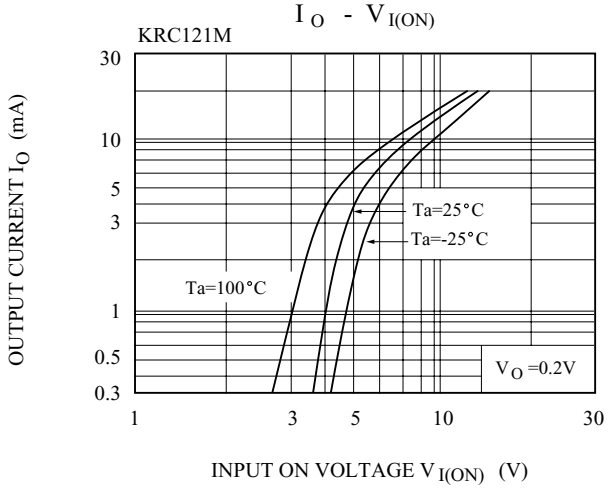
G_I - I_O



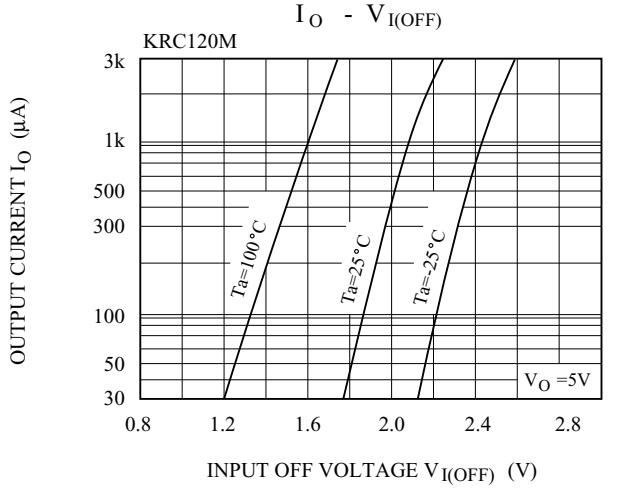
I_O - $V_{I(ON)}$



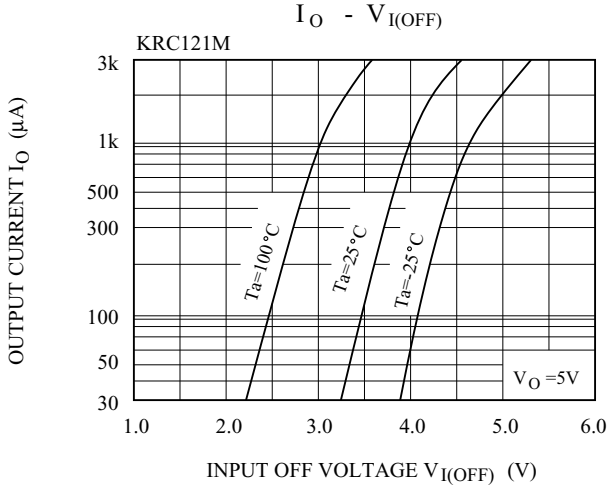
I_O - $V_{I(ON)}$



I_O - $V_{I(OFF)}$



I_O - $V_{I(OFF)}$



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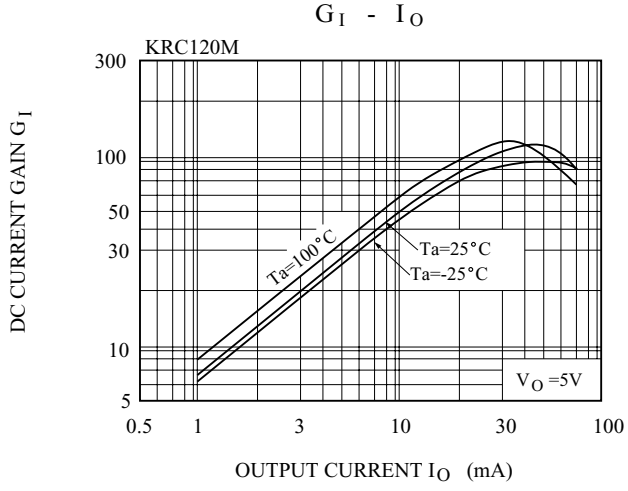

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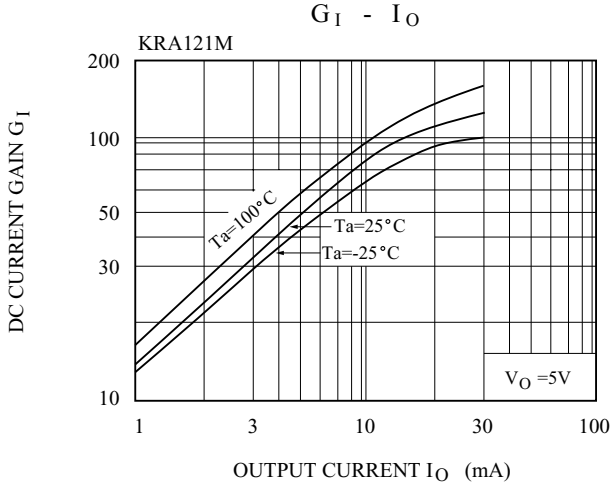
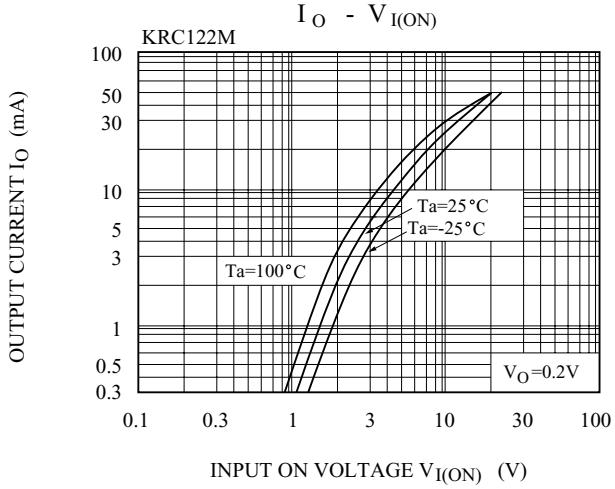
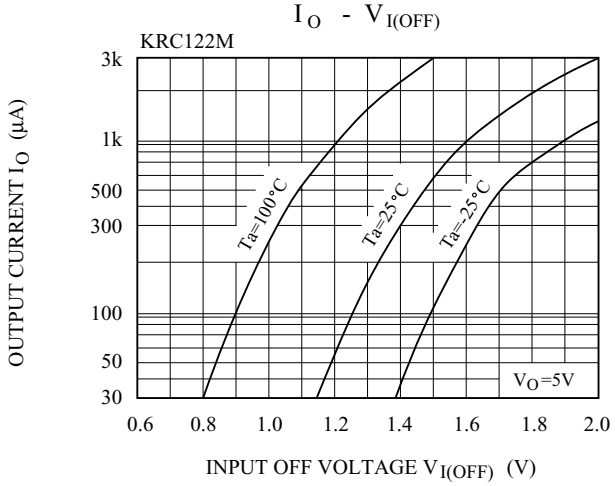


I_O - $V_{I(ON)}$



I_O - $V_{I(OFF)}$



G_I - I_O