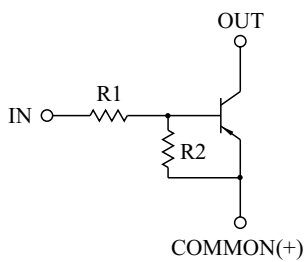


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

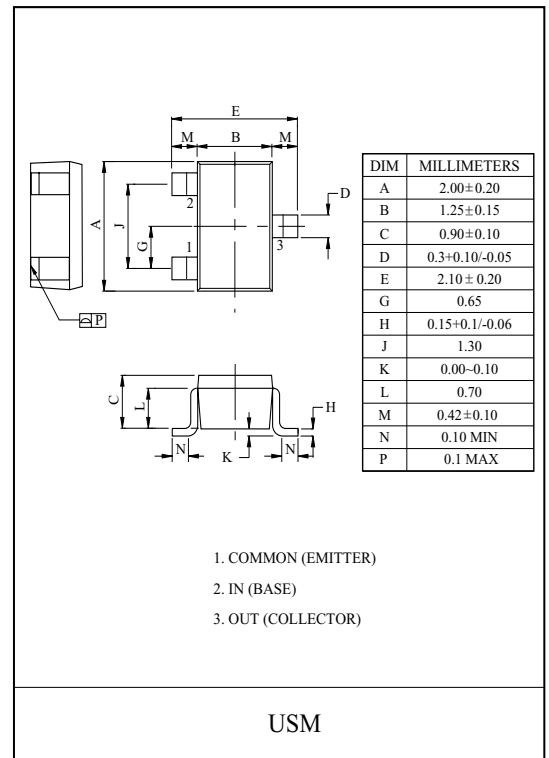
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Packing Density.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(k)	R2(k)
KRA301	4.7	4.7
KRA302	10	10
KRA303	22	22
KRA304	47	47
KRA305	2.2	47
KRA306	4.7	47



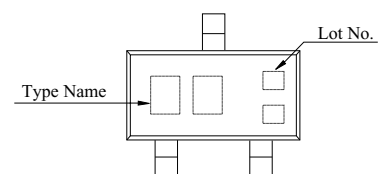
MAXIMUM RATING (Ta=25)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRA301 306	V_o	-50	V
Input Voltage	KRA301	V_i	-20, 10	V
	KRA302		-30, 10	
	KRA303		-40, 10	
	KRA304		-40, 10	
	KRA305		-12, 5	
	KRA306		-20, 5	
Output Current	KRA301 306	I_o	-100	mA
Power Dissipation		P_D	100	mW
Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	

MARK SPEC

TYPE	KRA301	KRA302	KRA303	KRA304	KRA305	KRA306
MARK	PA	PB	PC	PD	PE	PF

Marking



KRA301~KRA306

ELECTRICAL CHARACTERISTICS (Ta=25)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRA301 306	$I_{O(OFF)}$	$V_O=-50V, V_I=0$	-	-	-500	nA
DC Current Gain	KRA301	G_I	$V_O=-5V, I_O=-10mA$	30	55	-	
	KRA302			50	80	-	
	KRA303			70	120	-	
	KRA304			80	200	-	
	KRA305			80	200	-	
	KRA306			80	200	-	
Output Voltage	KRA301 306	$V_{O(ON)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input Voltage (ON)	KRA301	$V_{I(ON)}$	$V_O=-0.2V, I_O=-5mA$	-	-1.5	-2.0	V
	KRA302			-	-1.8	-2.4	
	KRA303			-	-2.1	-3.0	
	KRA304			-	-2.8	-5.0	
	KRA305			-	-0.8	-1.1	
	KRA306			-	-0.9	-1.3	
Input Voltage (OFF)	KRA301 304	$V_{I(OFF)}$	$V_O=-5V, I_O=-0.1mA$	-1.0	-1.2	-	V
	KRA305 306			-0.5	-0.65	-	
Transition Frequency	KRA301 306	f_T^*	$V_O=-10V, I_O=-5mA$	-	200	-	MHz
Input Current	KRA301	I_I	$V_I=-5V$	-	-	-1.8	mA
	KRA302			-	-	-0.88	
	KRA303			-	-	-0.36	
	KRA304			-	-	-0.18	
	KRA305			-	-	-3.6	
	KRA306			-	-	-1.8	
Input Resistor	KRA301	R1	-	3.29	4.7	6.11	k
	KRA302			7	10	13	
	KRA303			15.4	22	28.6	
	KRA304			32.9	47	61.1	
	KRA305			1.54	2.2	2.86	
	KRA306			3.29	4.7	6.11	
Resistor Ratio	KRA301~304	R2/R1	-	0.8	1.0	1.2	
	KRA305			17	21	26	
	KRA306			8	10	12	

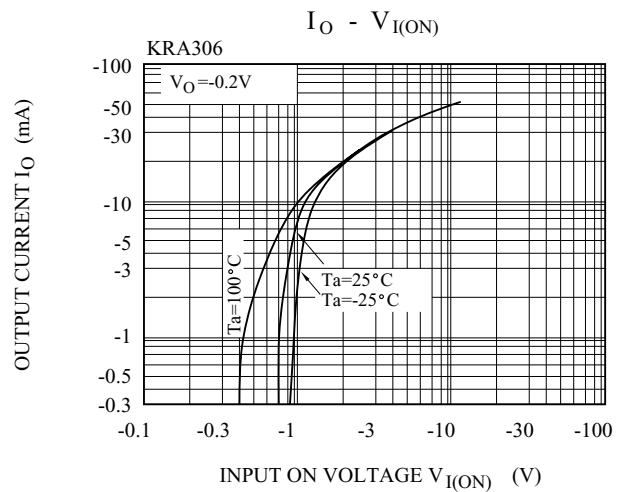
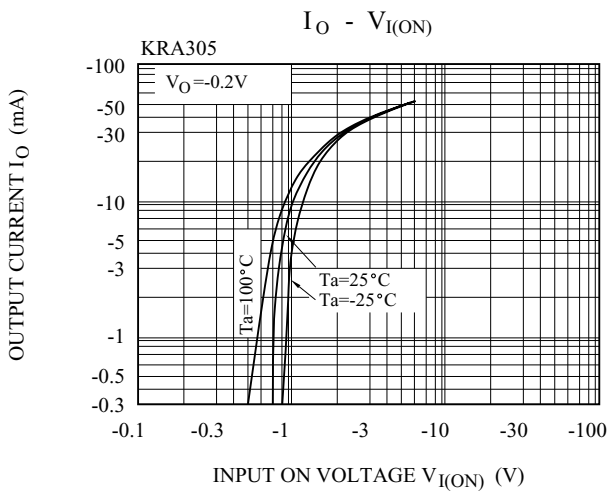
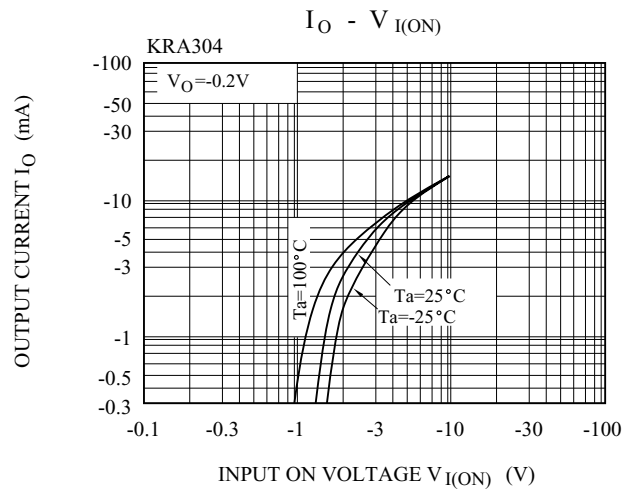
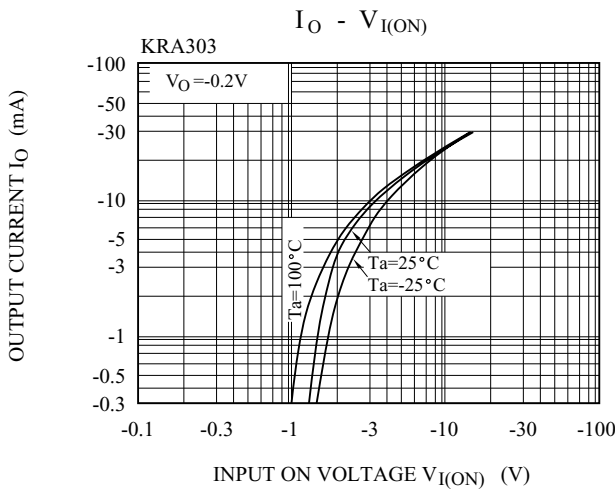
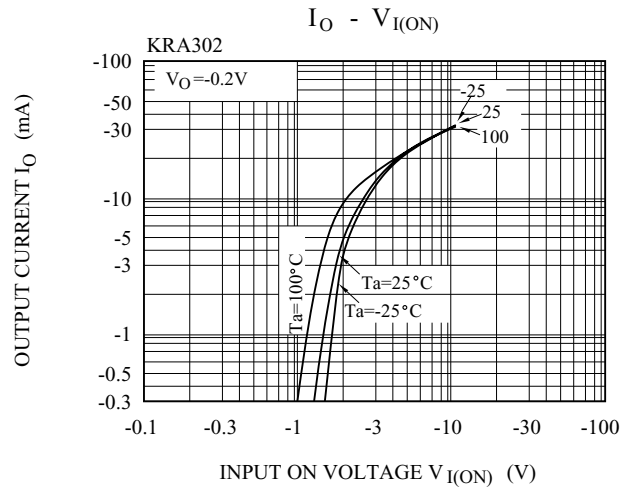
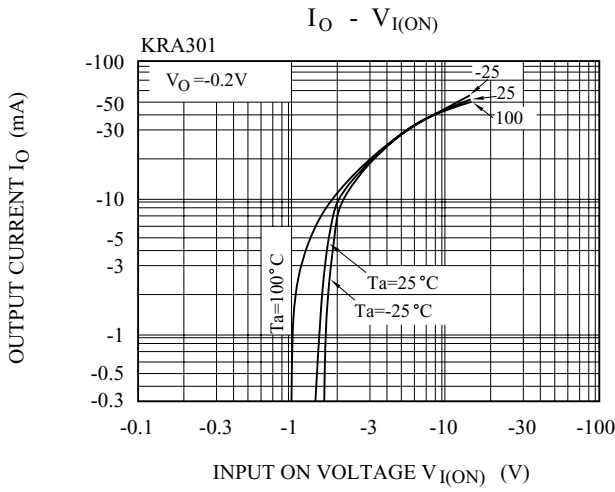
Note : * Characteristic of Transistor Only.

KRA301~KRA306

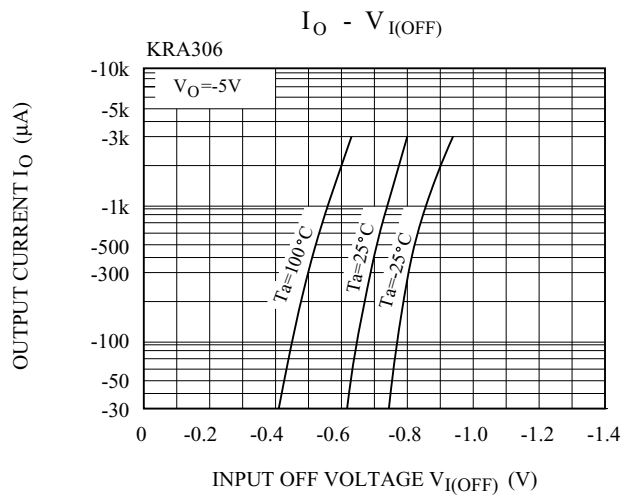
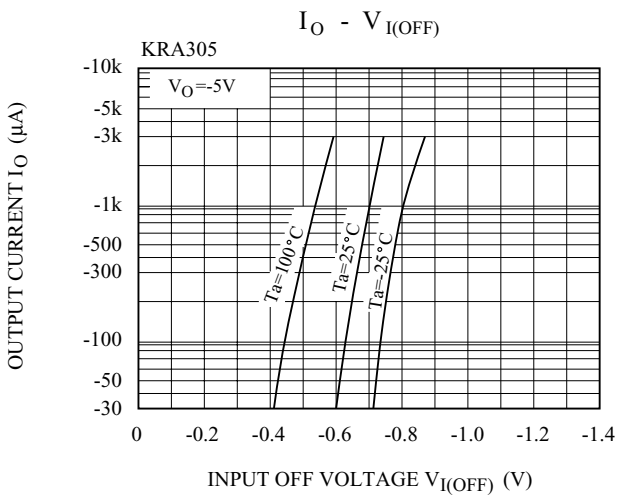
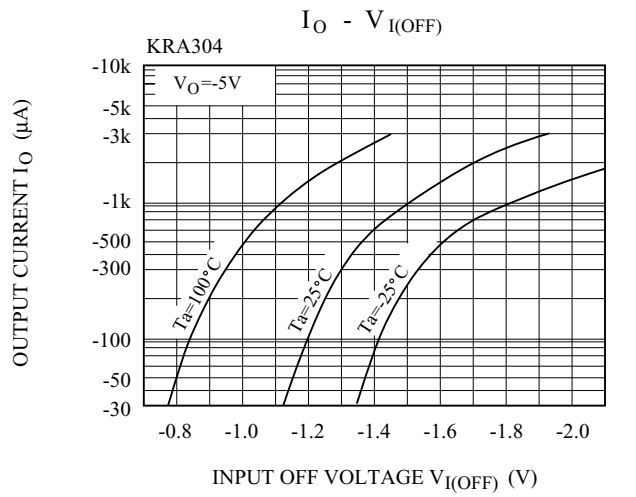
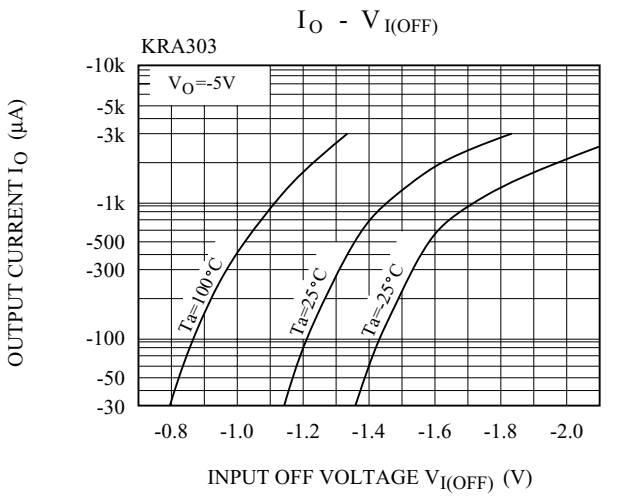
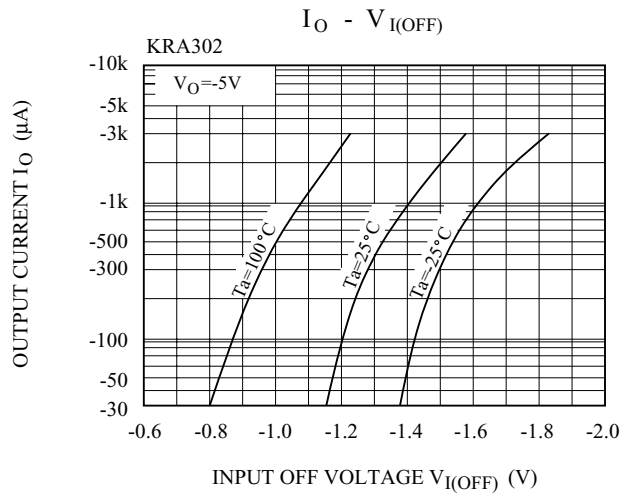
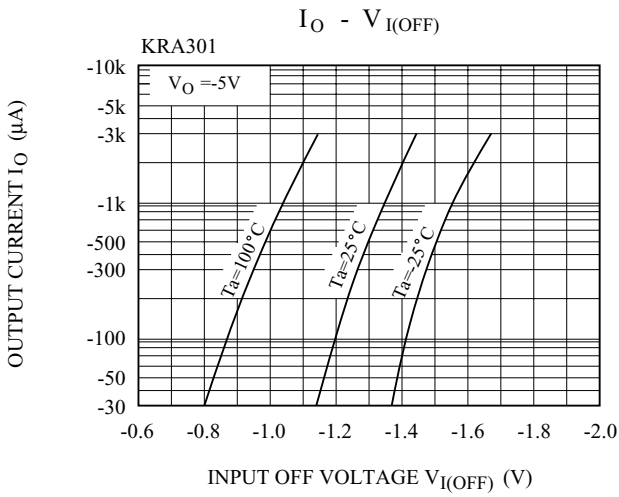
ELECTRICAL CHARACTERISTICS (Ta=25)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRA301	t_r	$V_O=-5V$ $V_{IN}=-5V$ $R_L=1k$	-	0.07	-	μs
		KRA302			-	0.06	-	
		KRA303			-	0.2	-	
		KRA304			-	0.24	-	
		KRA305			-	0.02	-	
		KRA306			-	0.07	-	
	Storage Time	KRA301	t_{stg}		-	1.1	-	
		KRA302			-	1.1	-	
		KRA303			-	1.1	-	
		KRA304			-	1.1	-	
		KRA305			-	1.1	-	
		KRA306			-	1.1	-	
	Fall Time	KRA301	t_f		-	0.15	-	
		KRA302			-	0.24	-	
		KRA303			-	0.38	-	
		KRA304			-	0.63	-	
		KRA305			-	0.1	-	
		KRA306			-	0.2	-	

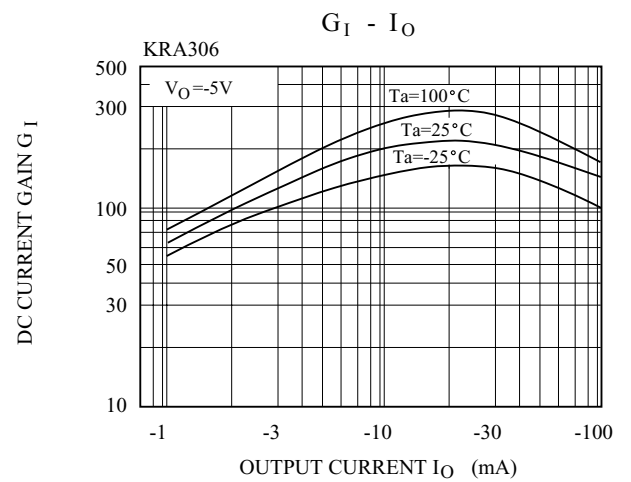
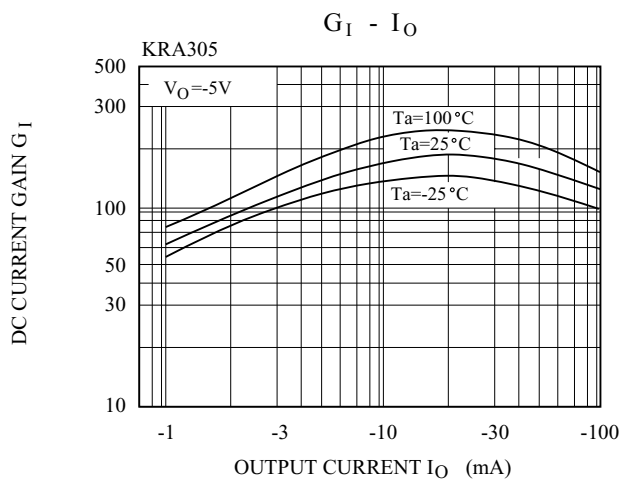
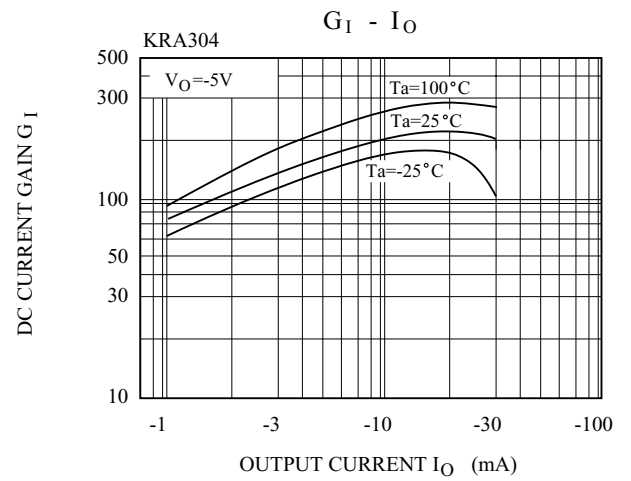
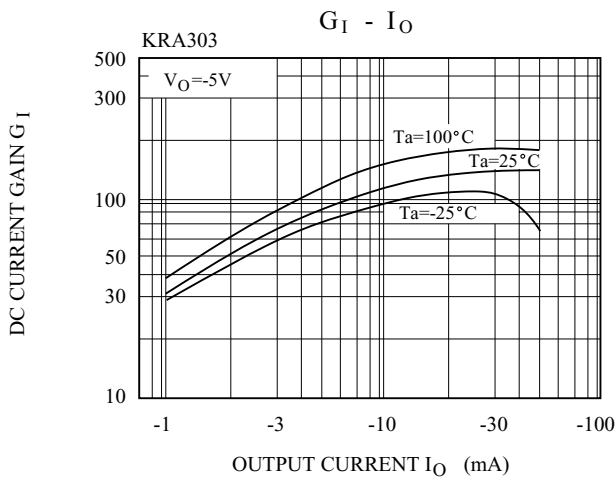
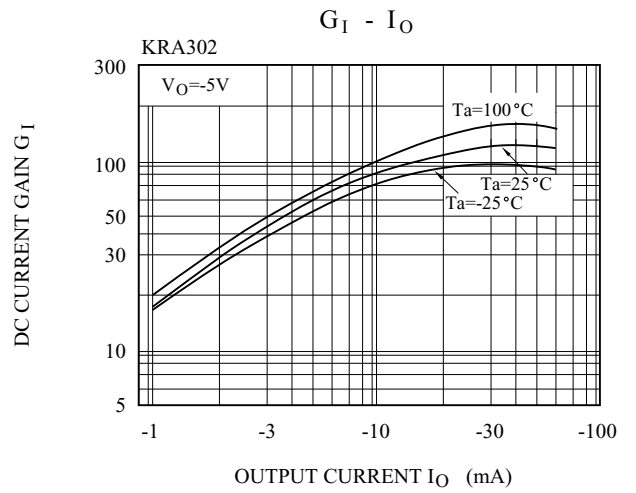
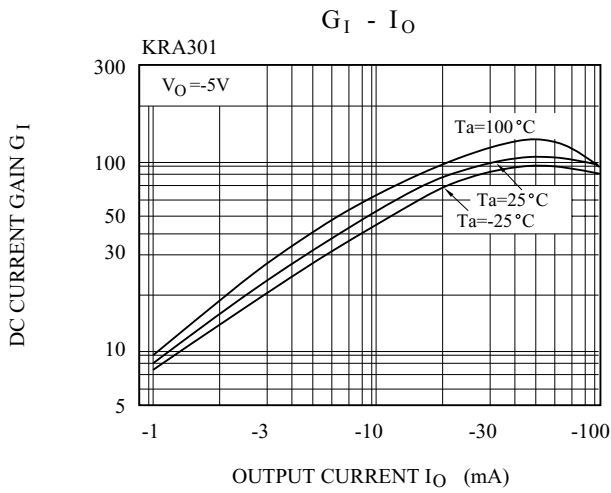
KRA301~KRA306



KRA301~KRA306



KRA301~KRA306



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