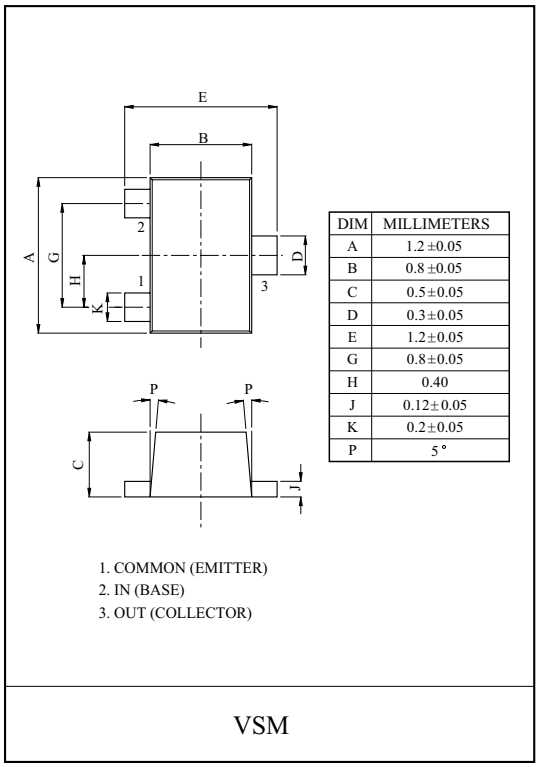
KRA301V~KRA306V

EPITAXIAL PLANAR PNP TRANSISTOR

SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

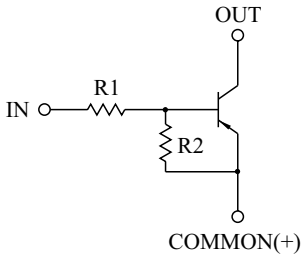
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Packing Density.



DIM	MILLIMETERS
A	1.2 ±0.05
B	0.8 ±0.05
C	0.5±0.05
D	0.3±0.05
E	1.2±0.05
G	0.8±0.05
H	0.40
J	0.12± 0.05
K	0.2±0.05
P	5°

VSM

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRA301V	4.7	4.7
KRA302V	10	10
KRA303V	22	22
KRA304V	47	47
KRA305V	2.2	47
KRA306V	4.7	47

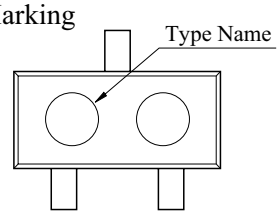
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRA301V ~306V	V_O	-50	V
Input Voltage	KRA301V	V_I	-20, 10	V
	KRA302V		-30, 10	
	KRA303V		-40, 10	
	KRA304V		-40, 10	
	KRA305V		-12, 5	
	KRA306V		-20, 5	
Output Current	KRA301V ~306V	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	KRA301V	KRA302V	KRA303V	KRA304V	KRA305V	KRA306V
MARK	PA	PB	PC	PD	PE	PF

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRA301V ~306V	$I_{O(OFF)}$	V_O=-50V, V_I=0	-	-	-500	nA
DC Current Gain	KRA301V	G_I	V_O=-5V, I_O=-10mA	30	55	-	
	KRA302V			50	80	-	
	KRA303V			70	120	-	
	KRA304V			80	200	-	
	KRA305V			80	200	-	
	KRA306V			80	200	-	
Output Voltage	KRA301V ~306V	$V_{O(ON)}$	I_O=-10mA, I_I=-0.5mA	-	-0.1	-0.3	V
Input Voltage (ON)	KRA301V	$V_{I(ON)}$	V_O=-0.2V, I_O=-5mA	-	-1.5	-2.0	V
	KRA302V			-	-1.8	-2.4	
	KRA303V			-	-2.1	-3.0	
	KRA304V			-	-2.8	-5.0	
	KRA305V			-	-0.8	-1.1	
	KRA306V			-	-0.9	-1.3	
Input Voltage (OFF)	KRA301V ~304V	$V_{I(OFF)}$	V_O=-5V, I_O=-0.1mA	-1.0	-1.2	-	V
	KRA305V ~306V			-0.5	-0.65	-	
Transition Frequency	KRA301V ~306V	f_T *	V_O=-10V, I_O=-5mA	-	200	-	MHz
Input Current	KRA301V	I_I	V_I=-5V	-	-	-1.8	mA
	KRA302V			-	-	-0.88	
	KRA303V			-	-	-0.36	
	KRA304V			-	-	-0.18	
	KRA305V			-	-	-3.6	
	KRA306V			-	-	-1.8	

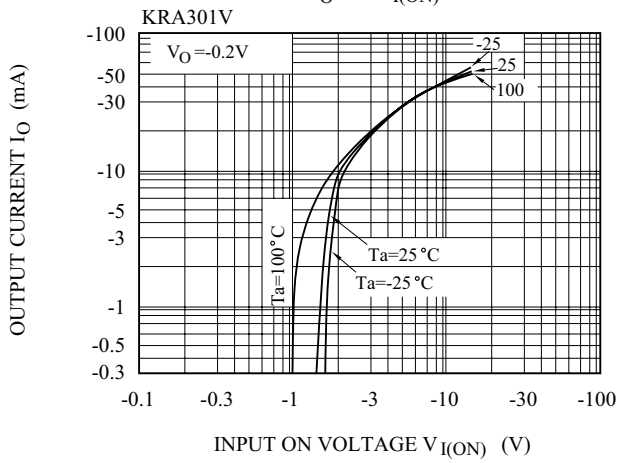
Note : * Characteristic of Transistor Only.

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRA301V	t_r	V_O=-5V V_{IN}=-5V R_L=1kΩ	-	0.07	-	μS
		KRA302V			-	0.06	-	
		KRA303V			-	0.2	-	
		KRA304V			-	0.24	-	
		KRA305V			-	0.02	-	
		KRA306V			-	0.07	-	
	Storage Time	KRA301V	t_{stg}		-	1.1	-	
		KRA302V			-	1.1	-	
		KRA303V			-	1.1	-	
		KRA304V			-	1.1	-	
		KRA305V			-	1.1	-	
		KRA306V			-	1.1	-	
	Fall Time	KRA301V	t_f		-	0.15	-	
		KRA302V			-	0.24	-	
		KRA303V			-	0.38	-	
		KRA304V			-	0.63	-	
		KRA305V			-	0.1	-	
		KRA306V			-	0.2	-	

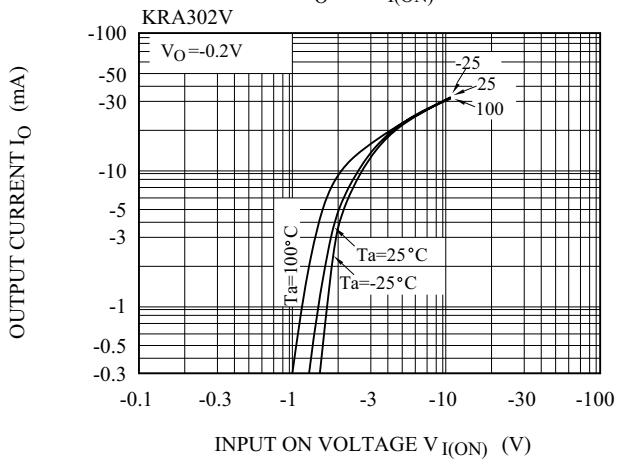
I_O - $V_{I(ON)}$

KRA301V



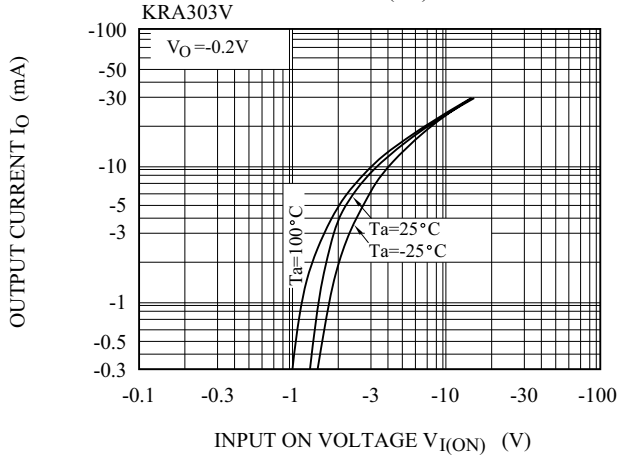
I_O - $V_{I(ON)}$

KRA302V



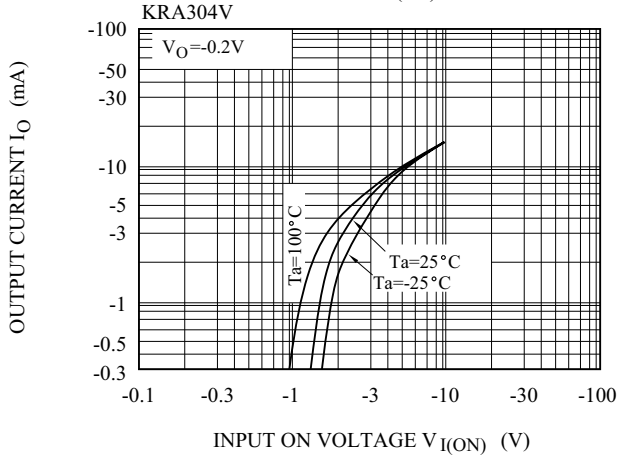
I_O - $V_{I(ON)}$

KRA303V



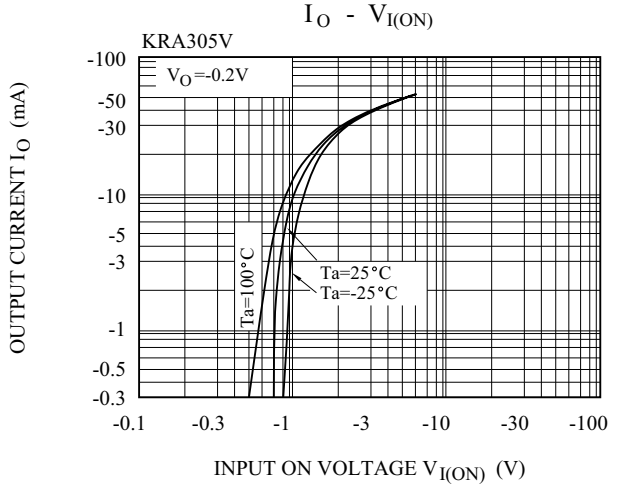
I_O - $V_{I(ON)}$

KRA304V



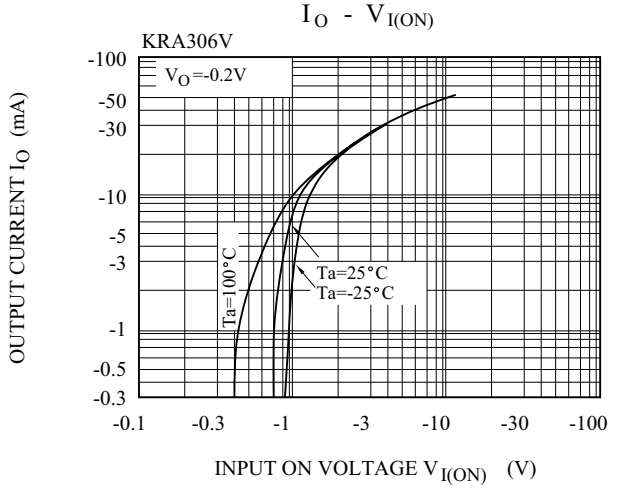
I_O - $V_{I(ON)}$

KRA305V



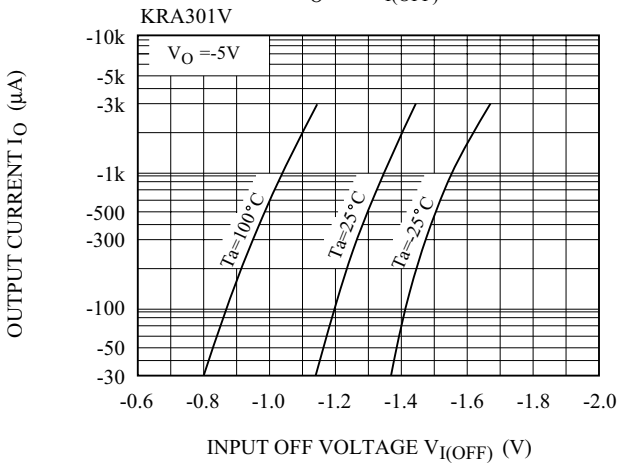
I_O - $V_{I(ON)}$

KRA306V



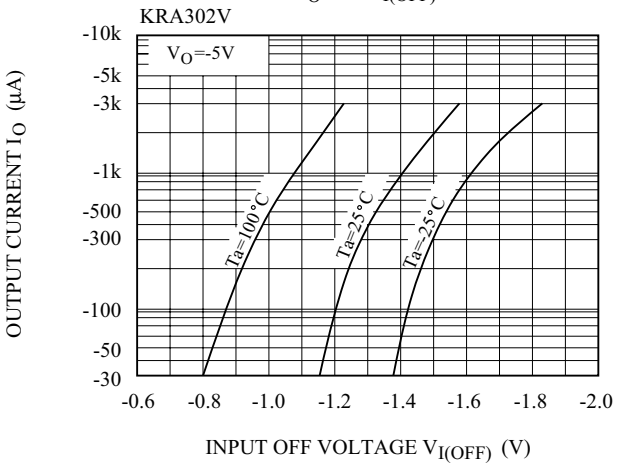
I_O - $V_{I(OFF)}$

KRA301V



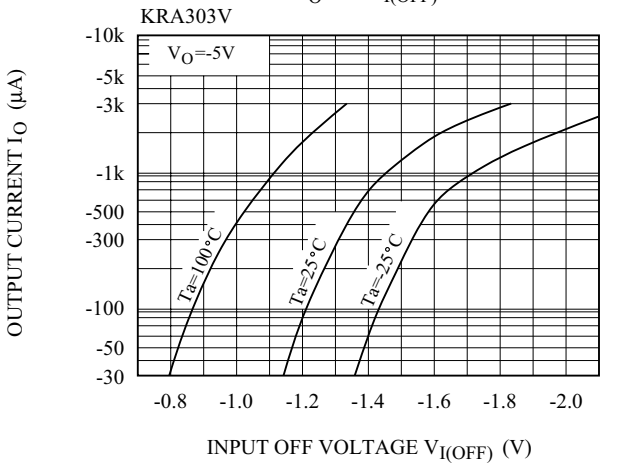
I_O - $V_{I(OFF)}$

KRA302V



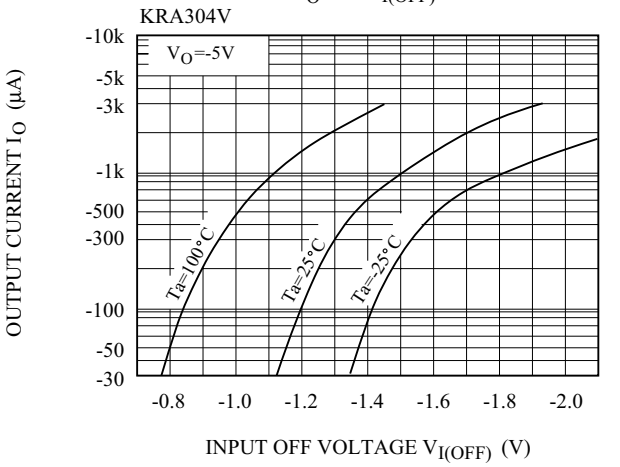
I_O - $V_{I(OFF)}$

KRA303V



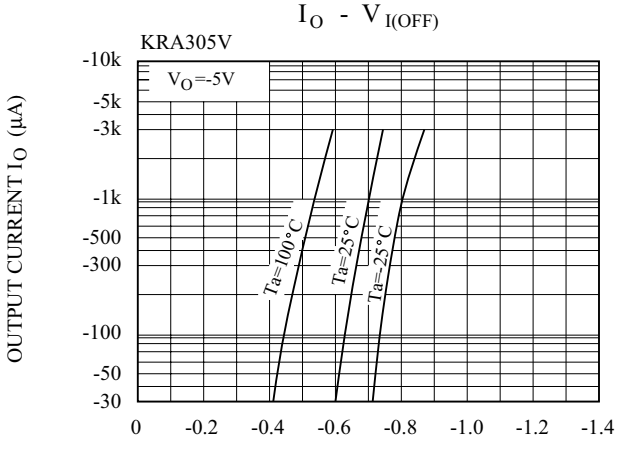
I_O - $V_{I(OFF)}$

KRA304V



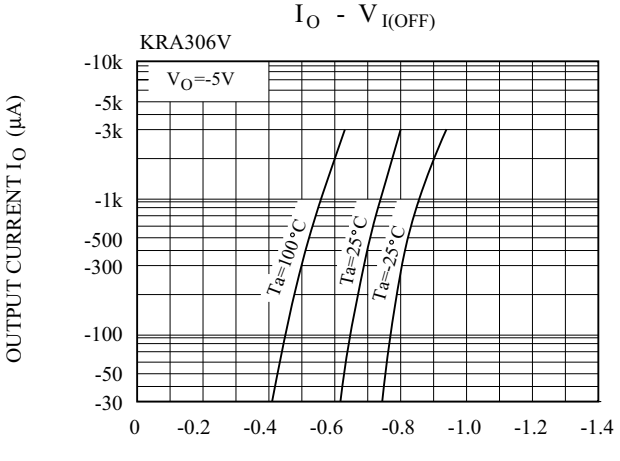
I_O - $V_{I(OFF)}$

KRA305V



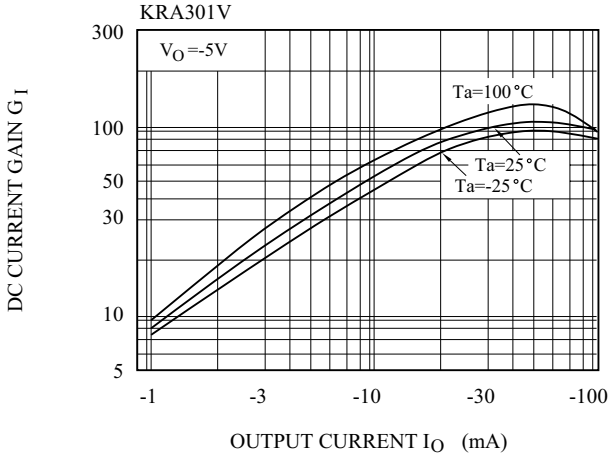
I_O - $V_{I(OFF)}$

KRA306V



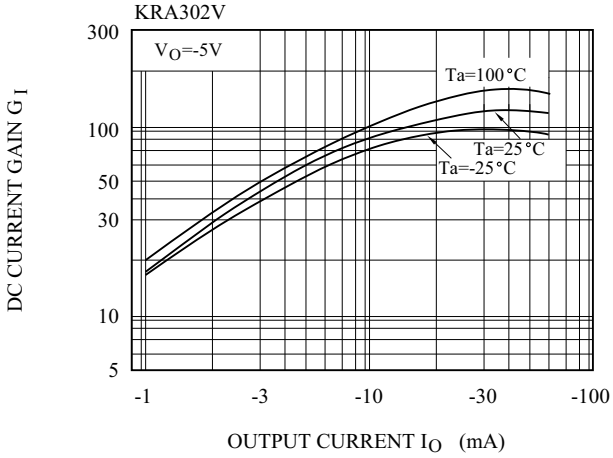
G_I - I_O

KRA301V



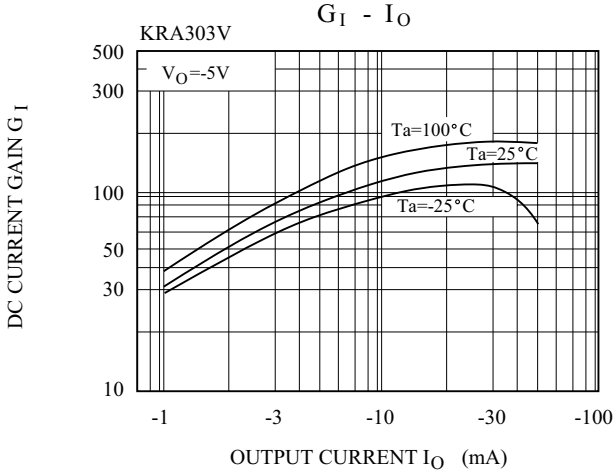
G_I - I_O

KRA302V



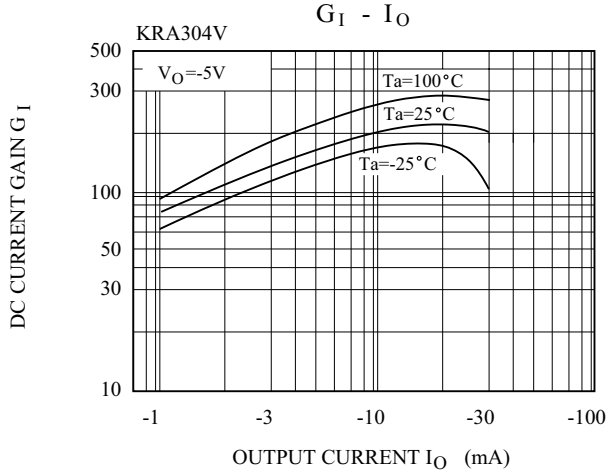
G_I - I_O

KRA303V



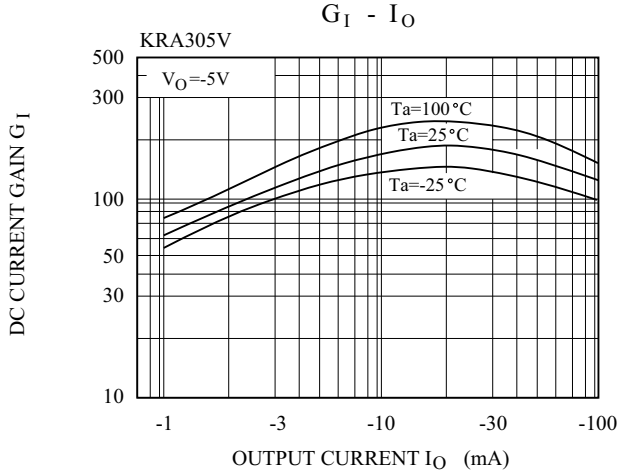
G_I - I_O

KRA304V



G_I - I_O

KRA305V



G_I - I_O

KRA306V

