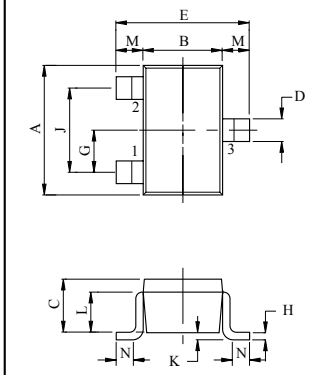
KRC401~KRC406

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.
- High Packing Density.

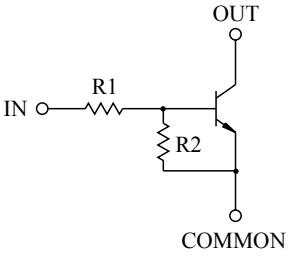


DIM	MILLIMETERS
A	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10± 0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00-0.10
L	0.70
M	0.42±0.10
N	0.10 MIN

1. COMMON (EMITTER)
2. IN (BASE)
3. OUT (COLLECTOR)

USM

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC401	4.7	4.7
KRC402	10	10
KRC403	22	22
KRC404	47	47
KRC405	2.2	47
KRC406	4.7	47

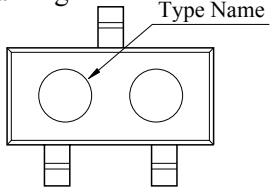
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC401～406	V_O	50	V
Input Voltage	KRC401	V_I	20, -10	V
	KRC402		30, -10	
	KRC403		40, -10	
	KRC404		40, -10	
	KRC405		12, -5	
	KRC406		20, -5	
Output Current	KRC401～406	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	KRC401	KRC402	KRC403	KRC404	KRC405	KRC406
MARK	NA	NB	NC	ND	NE	NF

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC401～406	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC401	G_I	V_O=5V, I_O=10mA	30	55	-	
	KRC402			50	80	-	
	KRC403			70	120	-	
	KRC404			80	200	-	
	KRC405			80	200	-	
	KRC406			80	200	-	
Output Voltage	KRC401～406	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)	KRC401	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.5	2.0	V
	KRC402			-	1.8	2.4	
	KRC403			-	2.1	3.0	
	KRC404			-	2.8	5.0	
	KRC405			-	0.8	1.1	
	KRC406			-	0.9	1.3	
Input Votlage (OFF)	KRC401～404	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	1.0	1.2	-	V
	KRC405～406			0.5	0.65	-	
Transition Frequency	KRC401～406	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current	KRC401	I_I	V_I=5V	-	-	1.8	mA
	KRC402			-	-	0.88	
	KRC403			-	-	0.36	
	KRC404			-	-	0.18	
	KRC405			-	-	3.6	
	KRC406			-	-	1.8	

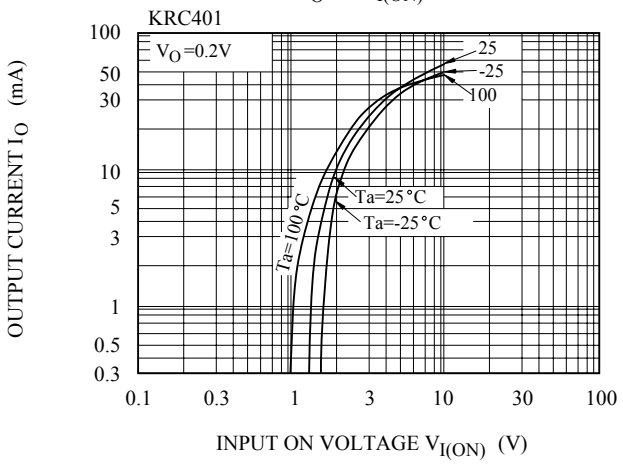
Note : * Characteristic of Transistor Only.

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC401	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.03	-	μS
		KRC402			-	0.05	-	
		KRC403			-	0.12	-	
		KRC404			-	0.22	-	
		KRC405			-	0.01	-	
		KRC406			-	0.03	-	
	Storage Time	KRC401	t_{stg}		-	2.0	-	
		KRC402			-	2.0	-	
		KRC403			-	2.0	-	
		KRC404			-	2.0	-	
		KRC405			-	2.0	-	
		KRC406			-	2.0	-	
	Fall Time	KRC401	t_f		-	0.12	-	
		KRC402			-	0.36	-	
		KRC403			-	0.35	-	
		KRC404			-	0.6	-	
		KRC405			-	0.1	-	
		KRC406			-	0.19	-	

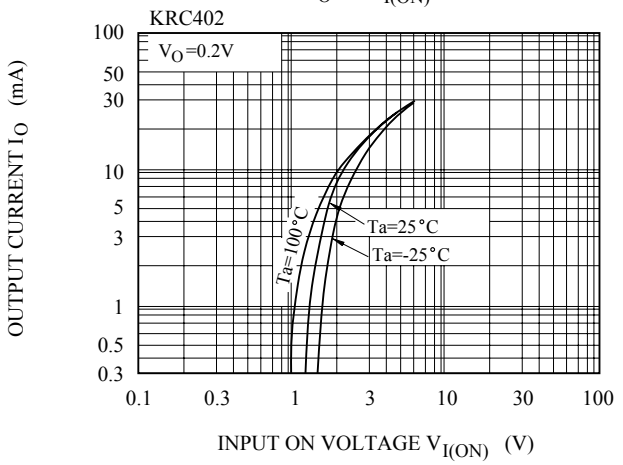
I_O - $V_{I(ON)}$

KRC401



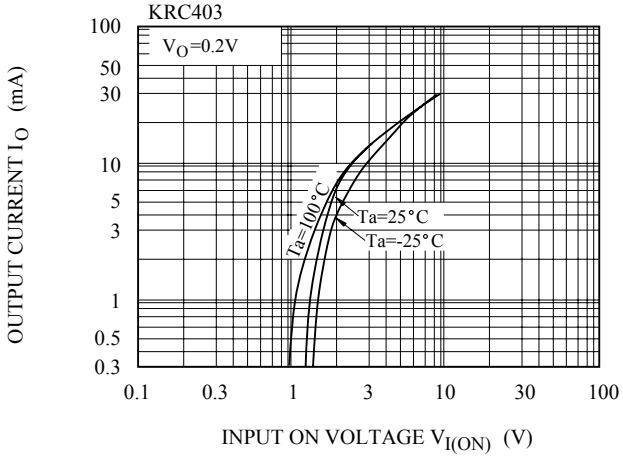
I_O - $V_{I(ON)}$

KRC402



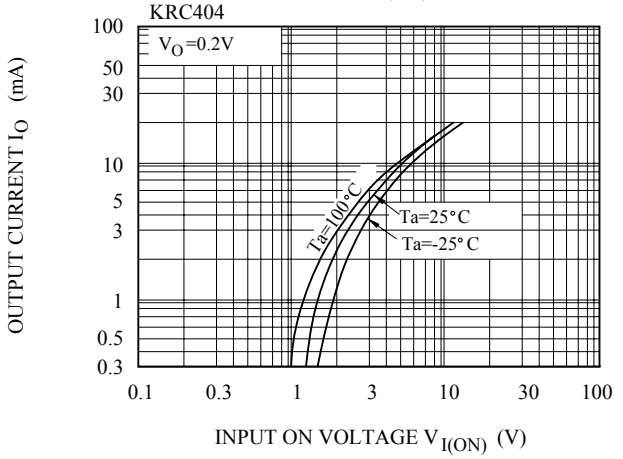
I_O - $V_{I(ON)}$

KRC403



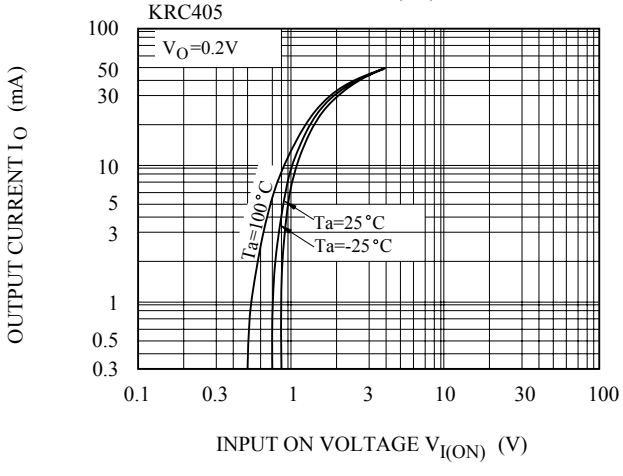
I_O - $V_{I(ON)}$

KRC404



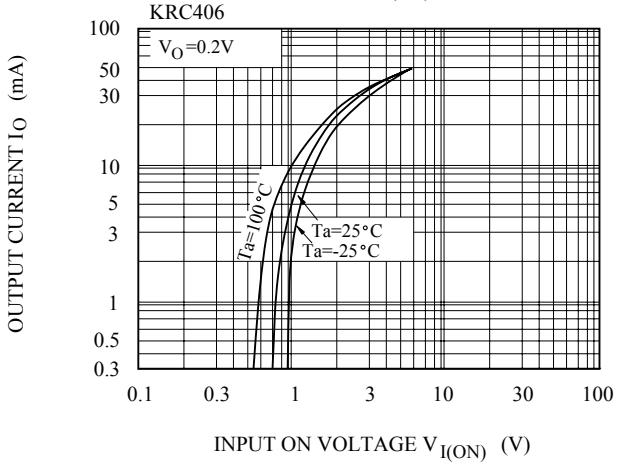
I_O - $V_{I(ON)}$

KRC405



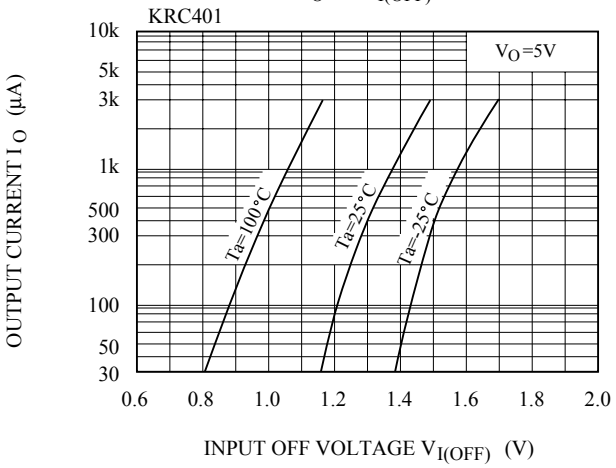
I_O - $V_{I(ON)}$

KRC406



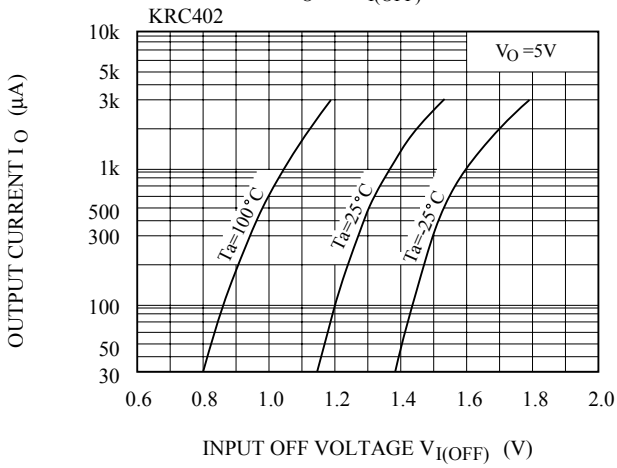
I_O - $V_{I(OFF)}$

KRC401



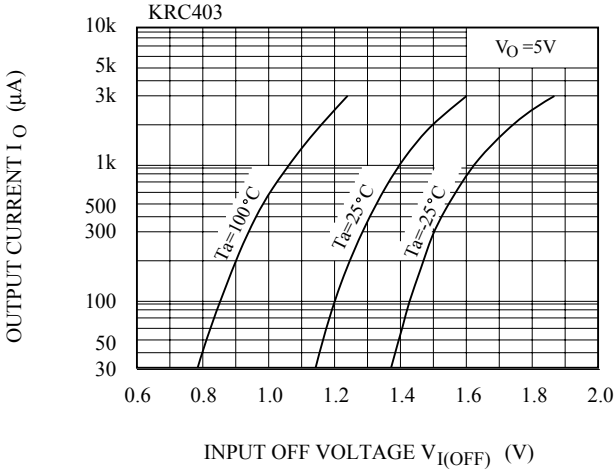
I_O - $V_{I(OFF)}$

KRC402



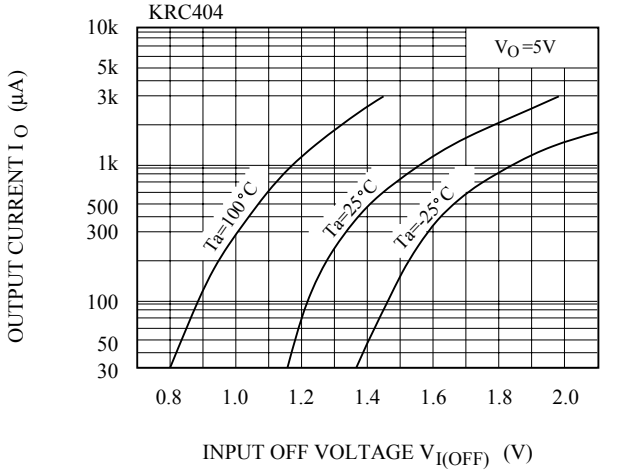
I_O - $V_{I(OFF)}$

KRC403



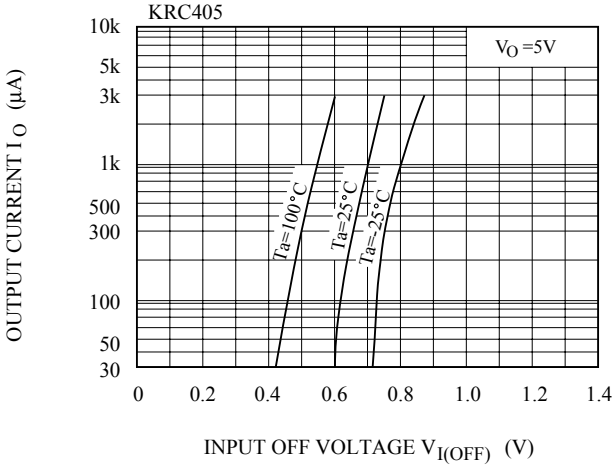
I_O - $V_{I(OFF)}$

KRC404



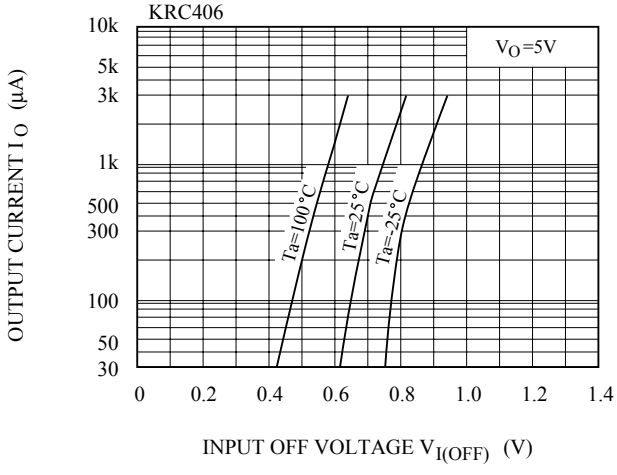
I_O - $V_{I(OFF)}$

KRC405



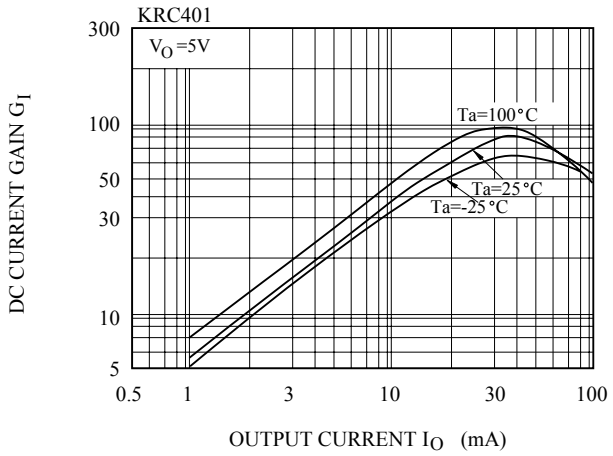
I_O - $V_{I(OFF)}$

KRC406



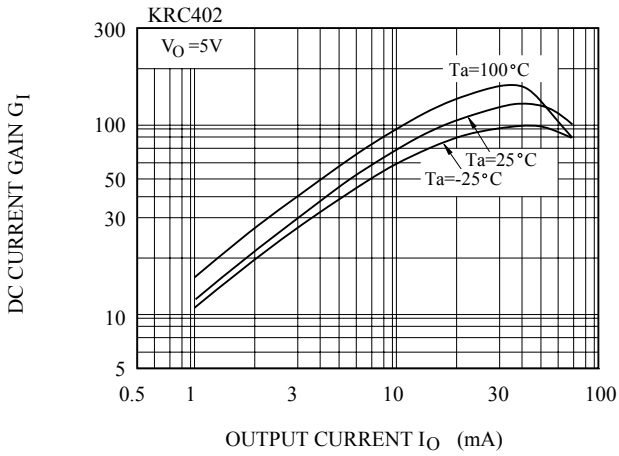
G_I - I_O

KRC401



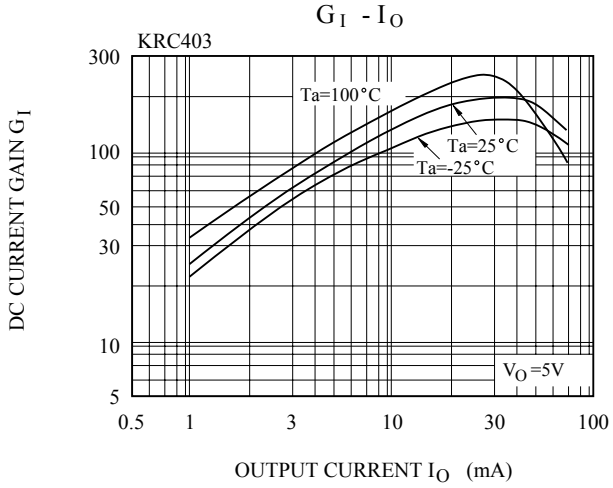
G_I - I_O

KRC402



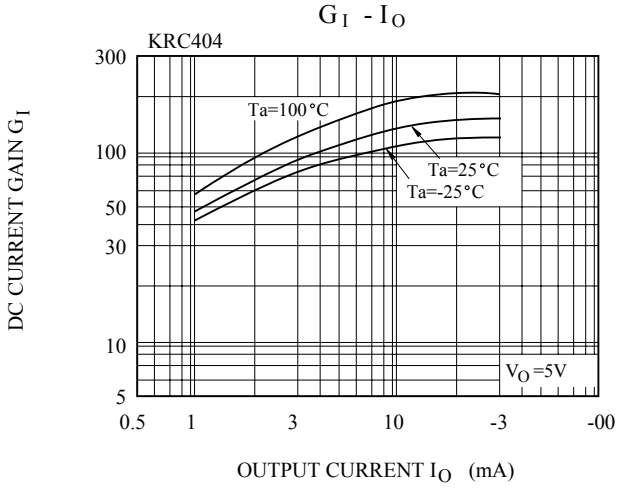
G_I - I_O

KRC403



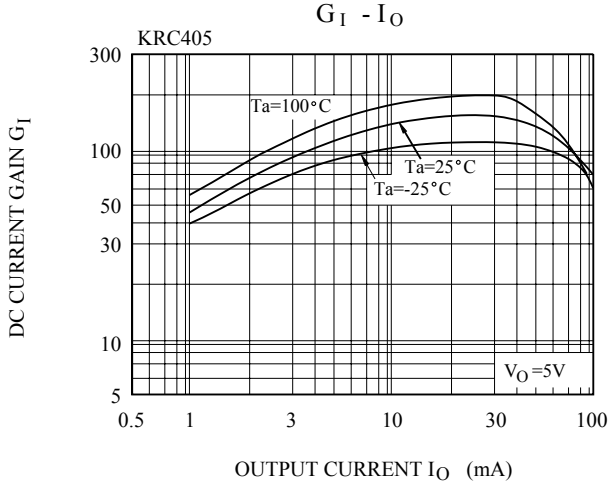
G_I - I_O

KRC404



G_I - I_O

KRC405



G_I - I_O

KRC406