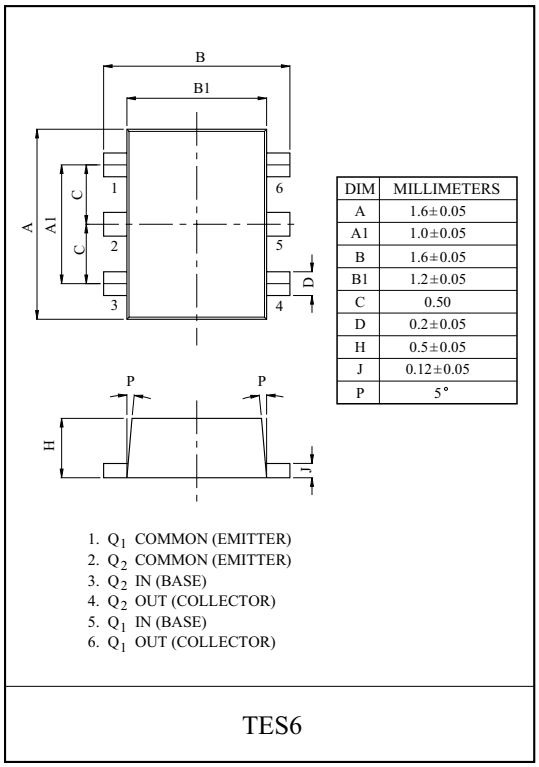
KRC836E~KRC842E

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.

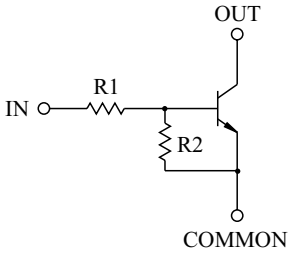


DIM	MILLIMETERS
A	1.6±0.05
A1	1.0±0.05
B	1.6±0.05
B1	1.2±0.05
C	0.50
D	0.2±0.05
H	0.5±0.05
J	0.12±0.05
P	5°

1. Q_1 COMMON (EMITTER)
2. Q_2 COMMON (EMITTER)
3. Q_2 IN (BASE)
4. Q_2 OUT (COLLECTOR)
5. Q_1 IN (BASE)
6. Q_1 OUT (COLLECTOR)

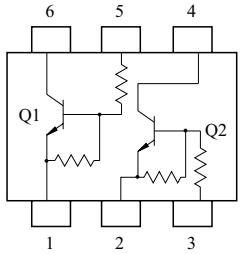
TES6

EQUIVALENT CIRCUIT



TYPE NO.	R1(kΩ)	R2(kΩ)
KRC836E	1	10
KRC837E	2.2	2.2
KRC838E	2.2	10
KRC839E	4.7	10
KRC840E	10	4.7
KRC841E	47	10
KRC842E	100	100

EQUIVALENT CIRCUIT (TOP VIEW)

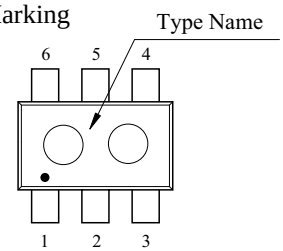


MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC836E~842E	V_O	50	V
Input Voltage	KRC836E	V_I	10, -5	V
	KRC837E		12, -10	
	KRC838E		12,-5	
	KRC839E		20, -7	
	KRC840E		30, -10	
	KRC841E		40, -15	
	KRC842E		40, -10	
Output Current	KRC836E~842E	I_O	100	mA
Power Dissipation		P_D *	200	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

* Total Rating.

Marking



MARK SPEC

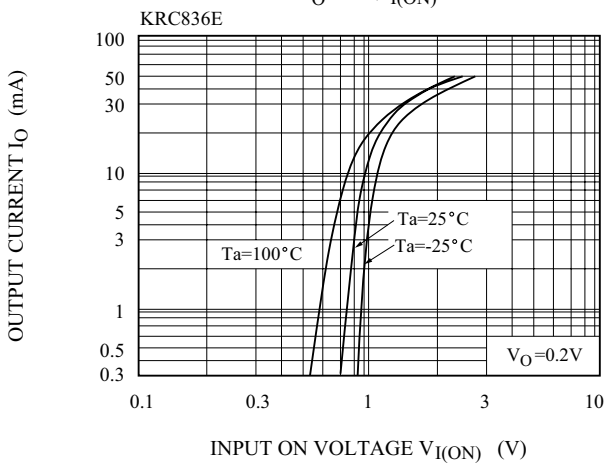
TYPE	KRC836E	KRC837E	KRC838E	KRC839E	KRC840E	KRC841E	KRC842E
MARK	Y2	Y4	Y5	Y6	Y7	Y8	Y9

ELECTRICAL CHARACTERISTICS (Ta=25℃)

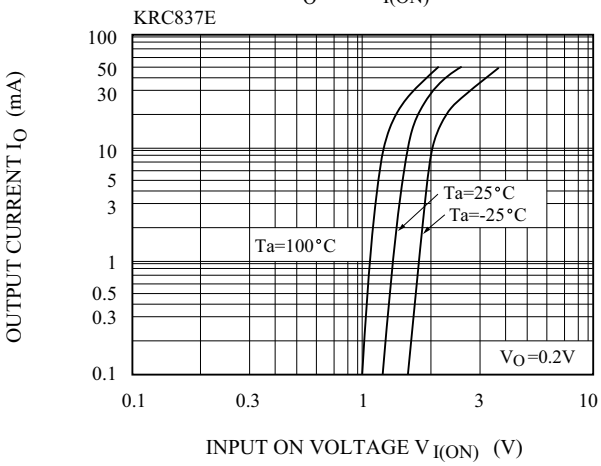
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC836E~842E	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC836E	G_I	V_O=5V, I_O=5mA	33	-	-	
	KRC837E		V_O=5V, I_O=20mA	20	-	-	
	KRC838E		V_O=5V, I_O=10mA	33	-	-	
	KRC839E		V_O=5V, I_O=10mA	30	-	-	
	KRC840E		V_O=5V, I_O=10mA	24	-	-	
	KRC841E		V_O=5V, I_O=5mA	33	-	-	
	KRC842E		V_O=5V, I_O=5mA	62	-	-	
Output Voltage	KRC836E	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	-	0.3	V
	KRC837E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC838E		I_O=10mA, I_I=0.5mA	-	-	0.3	
	KRC839E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC840E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC841E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC842E		I_O=5mA, I_I=0.25mA	-	0.1	0.3	
Input Voltage (ON)	KRC836E	$V_{I(ON)}$	V_O=0.3V, I_O=20mA	-	0.98	3	V
	KRC837E		V_O=0.3V, I_O=20mA	-	1.83	3	
	KRC838E		V_O=0.3V, I_O=20mA	-	1.22	3	
	KRC839E		V_O=0.3V, I_O=20mA	-	1.76	2.5	
	KRC840E		V_O=0.3V, I_O=2mA	-	2	3	
	KRC841E		V_O=0.3V, I_O=2mA	-	3.9	5	
	KRC842E		V_O=0.3V, I_O=1mA	-	1.64	3	
Input Voltage (OFF)	KRC836E	$V_{I(OFF)}$	V_{CC}=5V, I_O=100μA	0.3	0.63	-	V
	KRC837E			0.5	1.15	-	
	KRC838E			0.3	0.67	-	
	KRC839E			0.3	0.82	-	
	KRC840E			0.8	1.68	-	
	KRC841E			1	3.09	-	
	KRC842E			0.5	1.17	-	
Transition Frequency	KRC836E~842E	f_T*	V_O=10V, I_O=5mA	-	250	-	MHz
Input Current	KRC836E	I_I	V_I=5V	-	-	7.2	mA
	KRC837E			-	-	3.8	
	KRC838E			-	-	3.8	
	KRC839E			-	-	1.8	
	KRC840E			-	-	0.88	
	KRC841E			-	-	0.16	
	KRC842E			-	-	0.15	

Note : * Characteristic of Transistor Only.

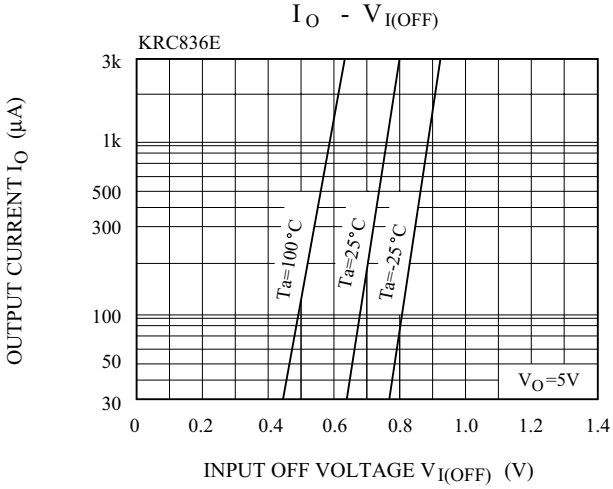
I_O - $V_{I(ON)}$



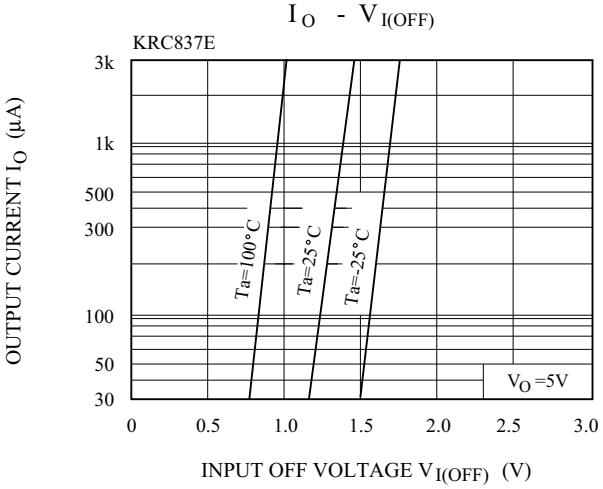
I_O - $V_{I(ON)}$



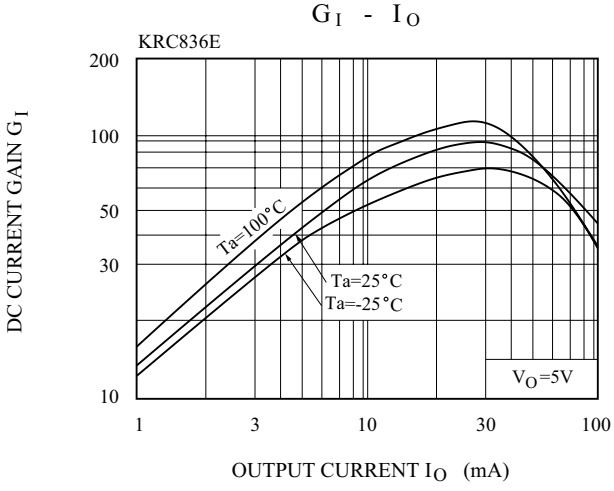
I_O - $V_{I(OFF)}$



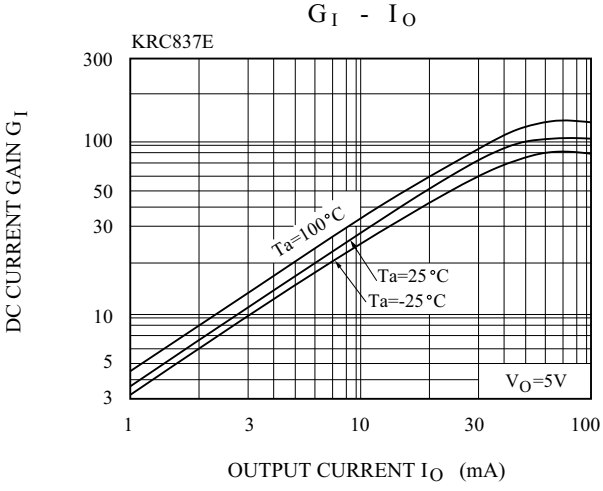
I_O - $V_{I(OFF)}$



G_I - I_O

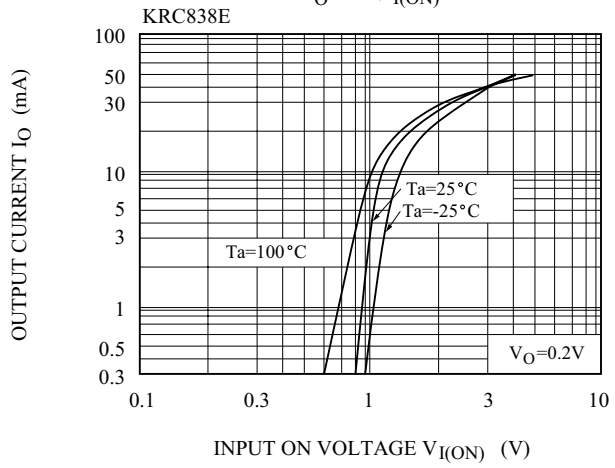


G_I - I_O



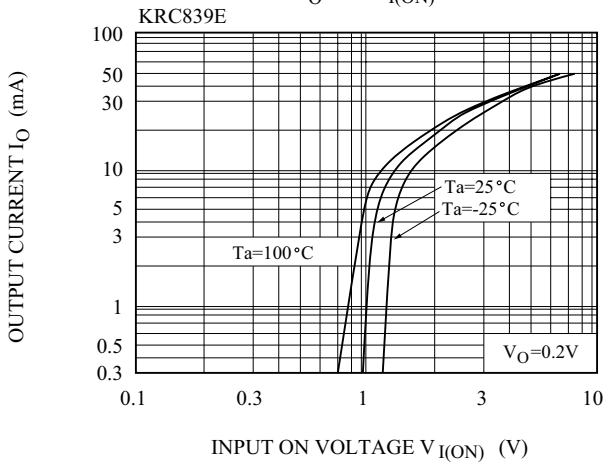
I_O - $V_{I(ON)}$

KRC838E



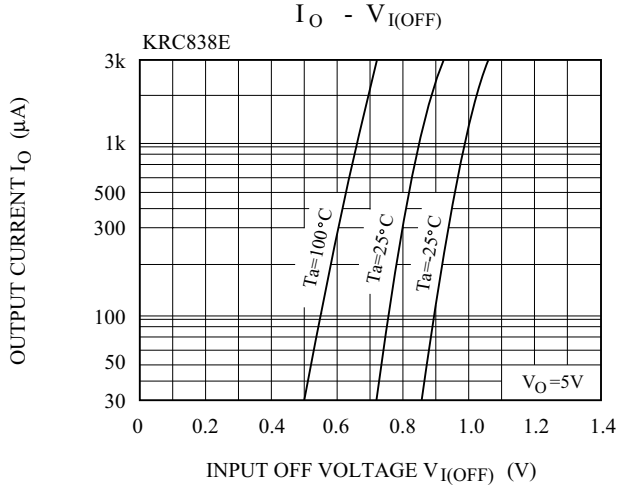
I_O - $V_{I(ON)}$

KRC839E



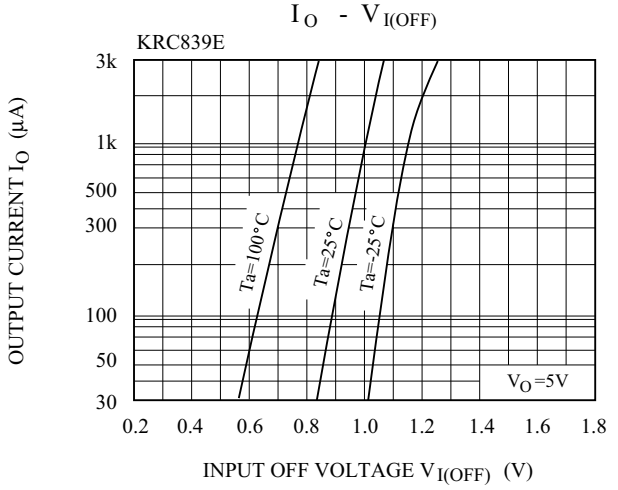
I_O - $V_{I(OFF)}$

KRC838E



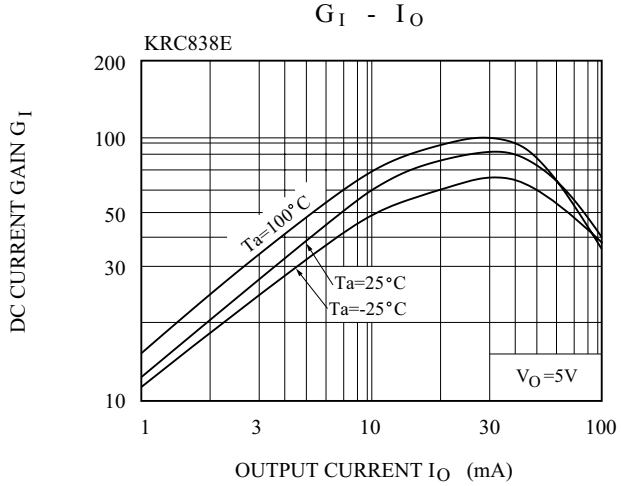
I_O - $V_{I(OFF)}$

KRC839E



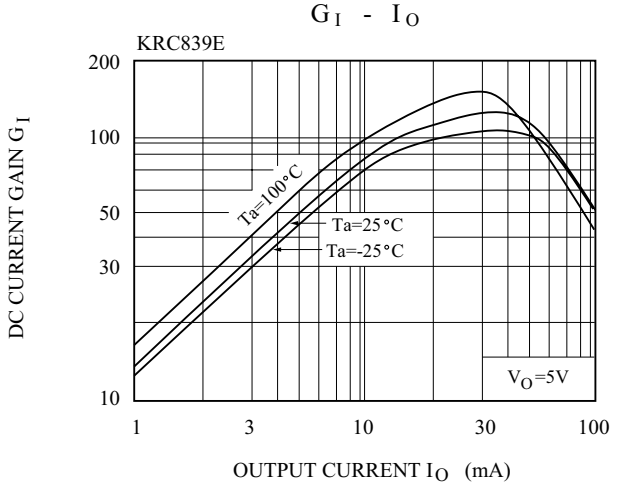
G_I - I_O

KRC838E



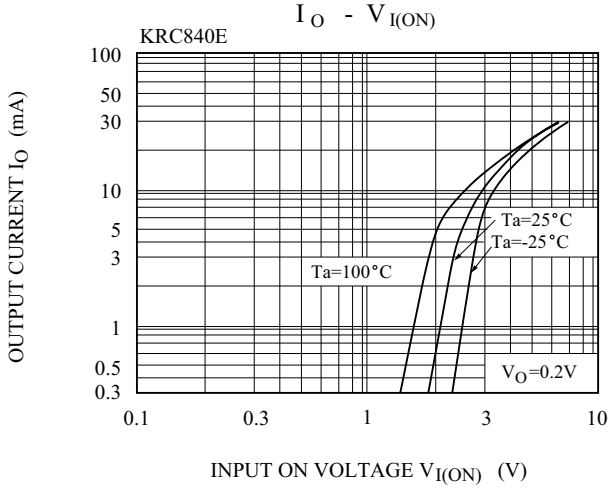
G_I - I_O

KRC839E



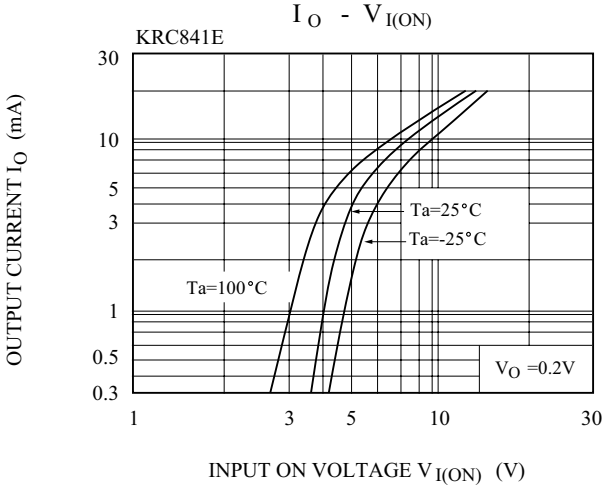
I_O - $V_{I(ON)}$

KRC840E



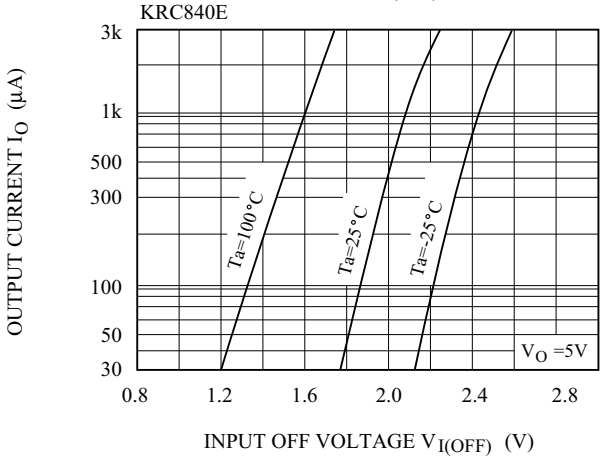
I_O - $V_{I(ON)}$

KRC841E



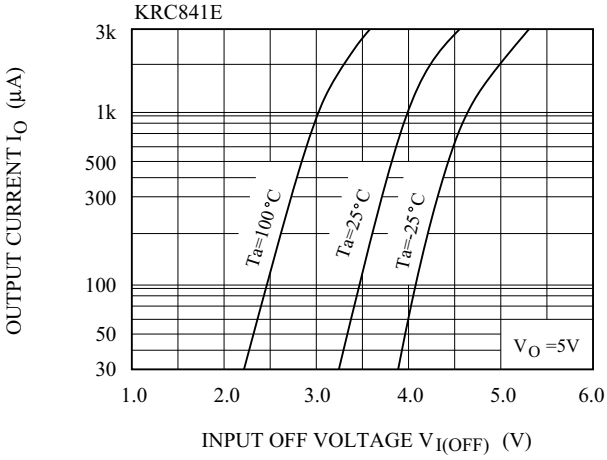
I_O - $V_{I(OFF)}$

KRC840E



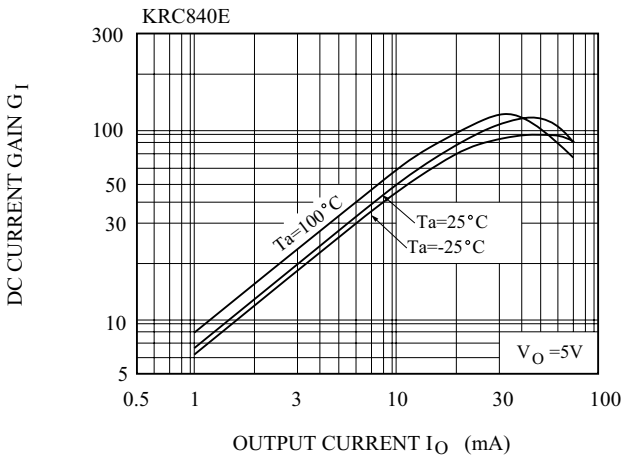
I_O - $V_{I(OFF)}$

KRC841E



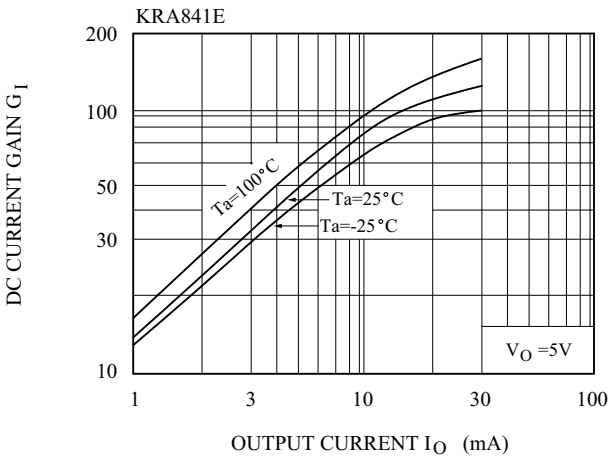
G_I - I_O

KRC840E

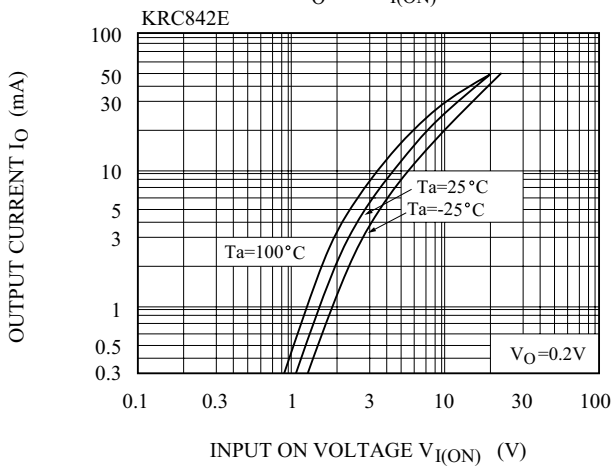


G_I - I_O

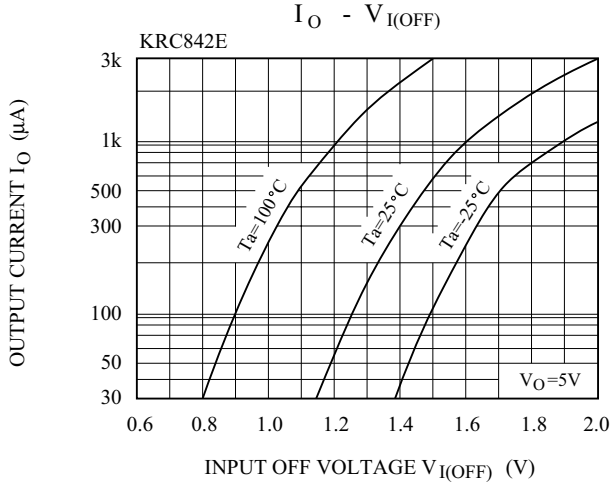
KRA841E



I_O - $V_{I(ON)}$



I_O - $V_{I(OFF)}$



G_I - I_O

