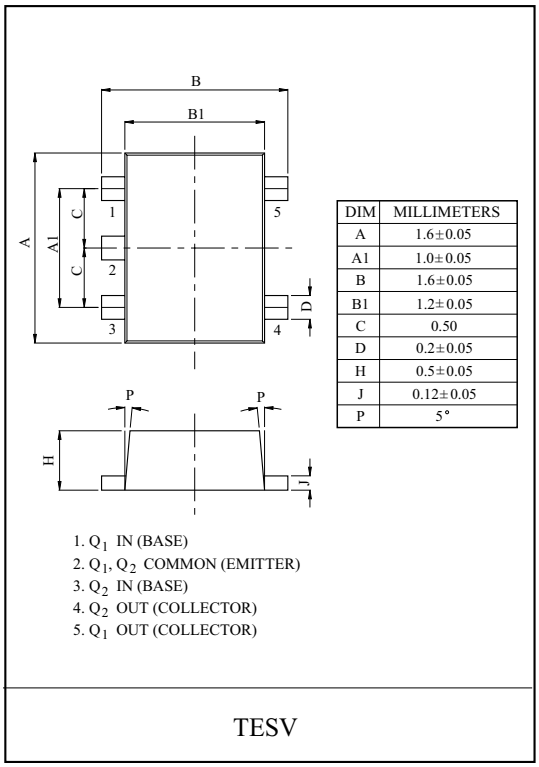
KRC666E~KRC672E

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.

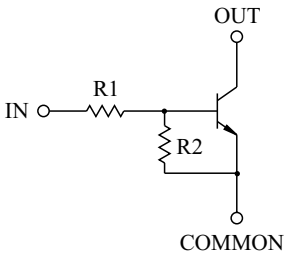


DIM	MILLIMETERS
A	1.6±0.05
A1	1.0±0.05
B	1.6±0.05
B1	1.2±0.05
C	0.50
D	0.2±0.05
H	0.5±0.05
J	0.12±0.05
P	5°

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

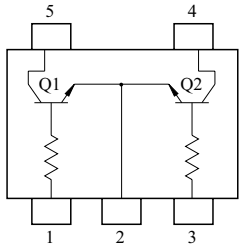
TESV

EQUIVALENT CIRCUIT



TYPE NO.	R1(kΩ)	R2(kΩ)
KRC666E	1	10
KRC667E	2.2	2.2
KRC668E	2.2	10
KRC669E	4.7	10
KRC670E	10	4.7
KRC671E	47	10
KRC672E	100	100

EQUIVALENT CIRCUIT (TOP VIEW)

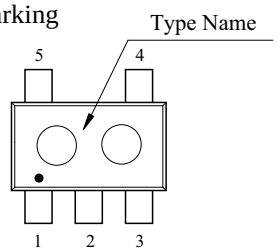


MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC666E~672E	V_O	50	V
Input Voltage	KRC666E	V_I	10, -5	V
	KRC667E		12, -10	
	KRC668E		12,-5	
	KRC669E		20, -7	
	KRC670E		30, -10	
	KRC671E		40, -15	
	KRC672E		40, -10	
Output Current	KRC666E~672E	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

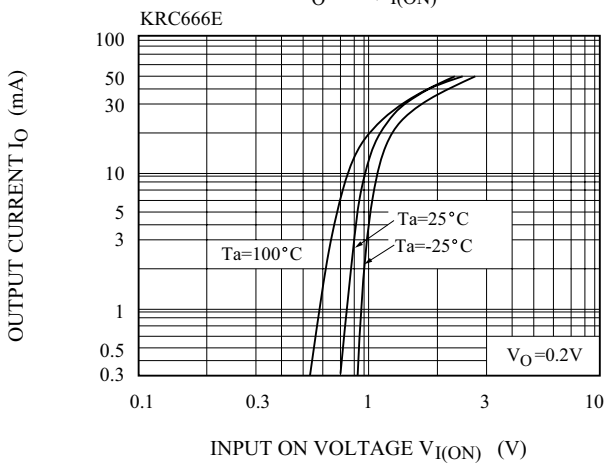
TYPE	KRC666E	KRC667E	KRC668E	KRC669E	KRC670E	KRC671E	KRC672E
MARK	N2	N4	N5	N6	N7	N8	N9

ELECTRICAL CHARACTERISTICS (Ta=25℃)

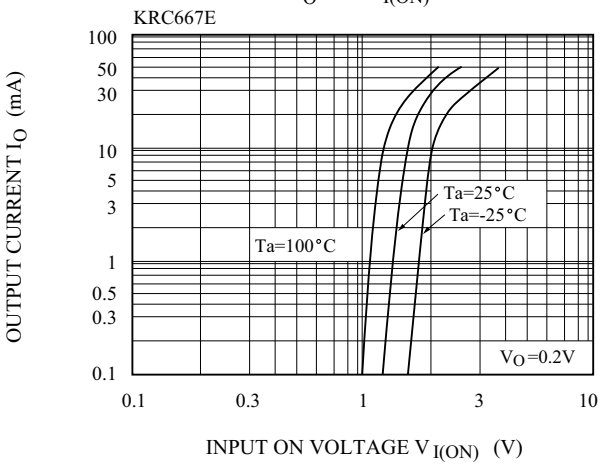
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC666E~672E	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC666E	G_I	V_O=5V, I_O=5mA	33	-	-	
	KRC667E		V_O=5V, I_O=20mA	20	-	-	
	KRC668E		V_O=5V, I_O=10mA	33	-	-	
	KRC669E		V_O=5V, I_O=10mA	30	-	-	
	KRC670E		V_O=5V, I_O=10mA	24	-	-	
	KRC671E		V_O=5V, I_O=5mA	33	-	-	
	KRC672E		V_O=5V, I_O=5mA	62	-	-	
Output Voltage	KRC666E	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	-	0.3	V
	KRC667E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC668E		I_O=10mA, I_I=0.5mA	-	-	0.3	
	KRC669E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC670E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC671E		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC672E		I_O=5mA, I_I=0.25mA	-	0.1	0.3	
Input Voltage (ON)	KRC666E	$V_{I(ON)}$	V_O=0.3V, I_O=20mA	-	0.98	3	V
	KRC667E		V_O=0.3V, I_O=20mA	-	1.83	3	
	KRC668E		V_O=0.3V, I_O=20mA	-	1.22	3	
	KRC669E		V_O=0.3V, I_O=20mA	-	1.76	2.5	
	KRC670E		V_O=0.3V, I_O=2mA	-	2	3	
	KRC671E		V_O=0.3V, I_O=2mA	-	3.9	5	
	KRC672E		V_O=0.3V, I_O=1mA	-	1.64	3	
Input Voltage (OFF)	KRC666E	$V_{I(OFF)}$	V_{CC}=5V, I_O=100μA	0.3	0.63	-	V
	KRC667E			0.5	1.15	-	
	KRC668E			0.3	0.67	-	
	KRC669E			0.3	0.82	-	
	KRC670E			0.8	1.68	-	
	KRC671E			1	3.09	-	
	KRC672E			0.5	1.17	-	
Transition Frequency	KRC666E~672E	f_T*	V_O=10V, I_O=5mA	-	250	-	MHz
Input Current	KRC666E	I_I	V_I=5V	-	-	7.2	mA
	KRC667E			-	-	3.8	
	KRC668E			-	-	3.8	
	KRC669E			-	-	1.8	
	KRC670E			-	-	0.88	
	KRC671E			-	-	0.16	
	KRC672E			-	-	0.15	

Note : * Characteristic of Transistor Only.

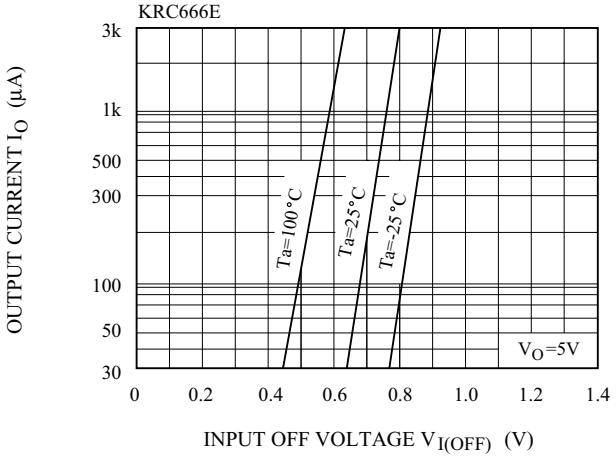
I_O - $V_{I(ON)}$



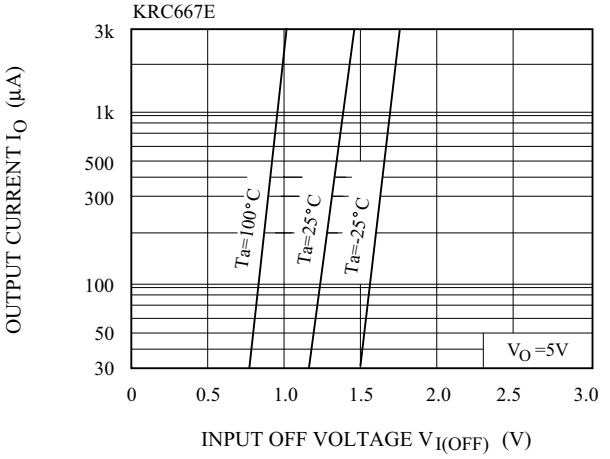
I_O - $V_{I(ON)}$



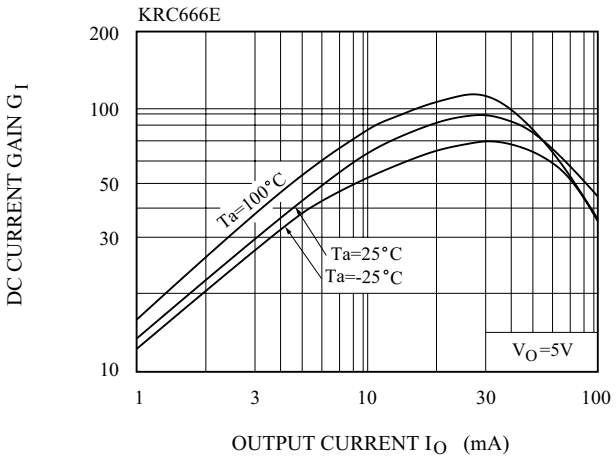
I_O - $V_{I(OFF)}$



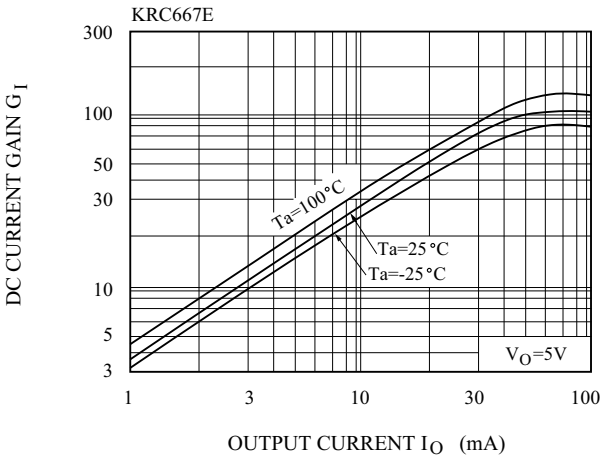
I_O - $V_{I(OFF)}$



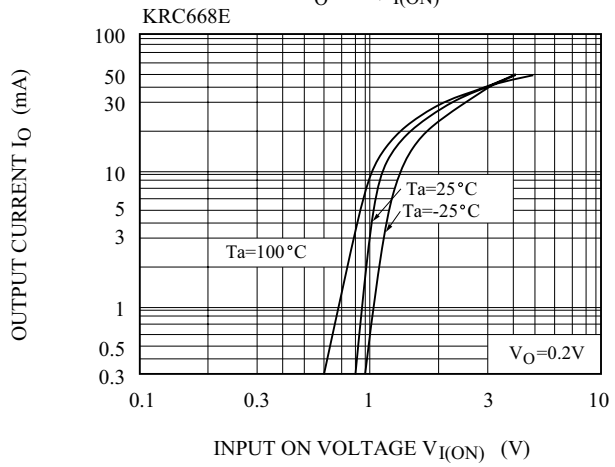
G_I - I_O



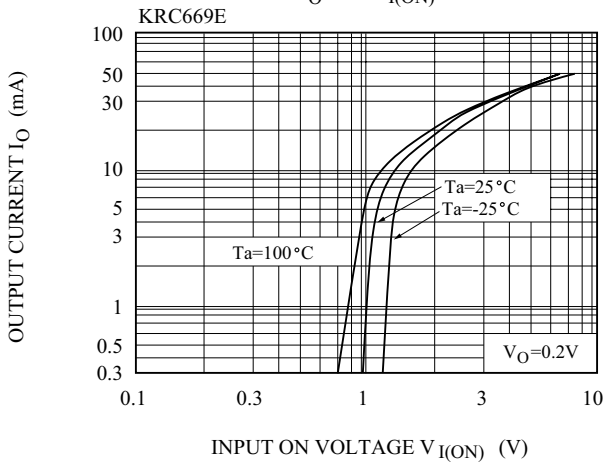
G_I - I_O



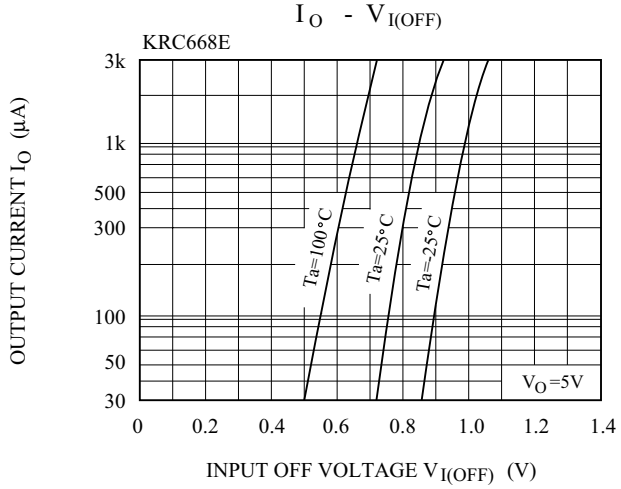
I_O - $V_{I(ON)}$



I_O - $V_{I(ON)}$



I_O - $V_{I(OFF)}$



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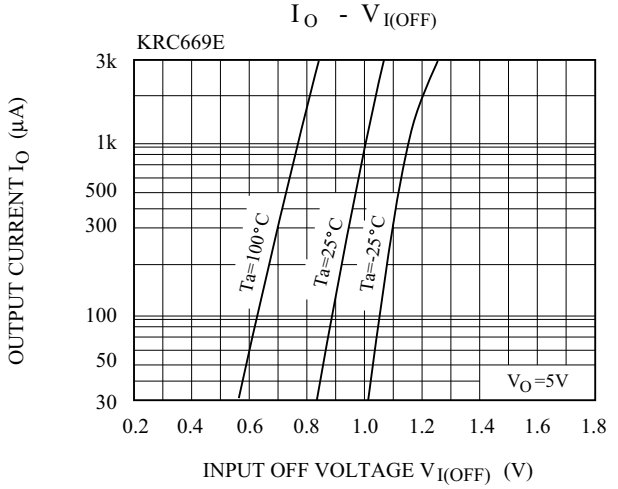

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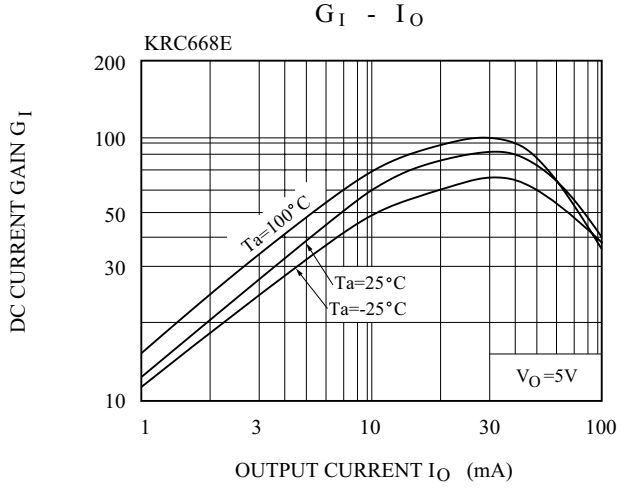

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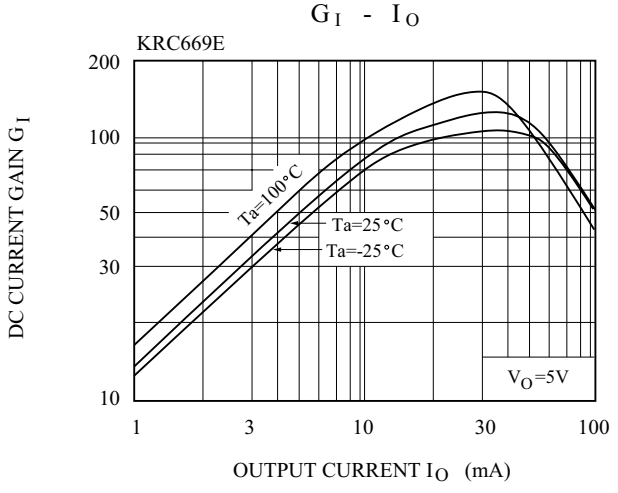
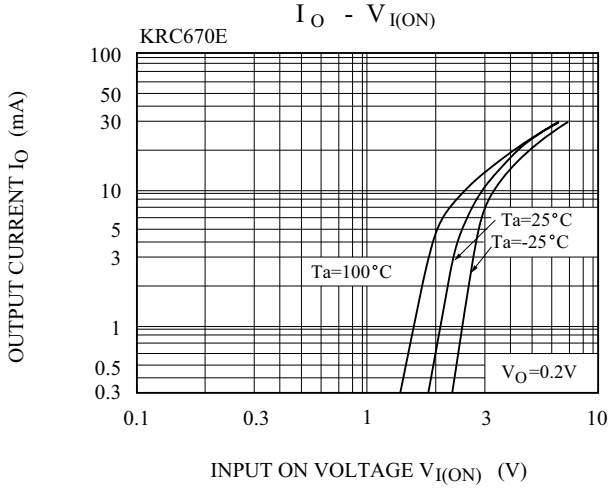


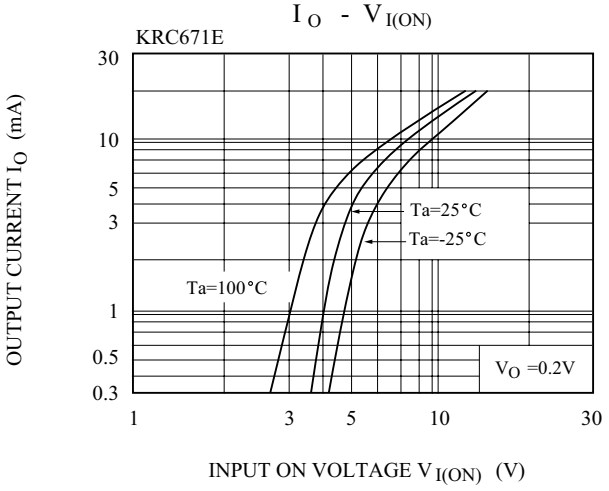
I_O - $V_{I(ON)}$

KRC670E



I_O - $V_{I(ON)}$

KRC671E



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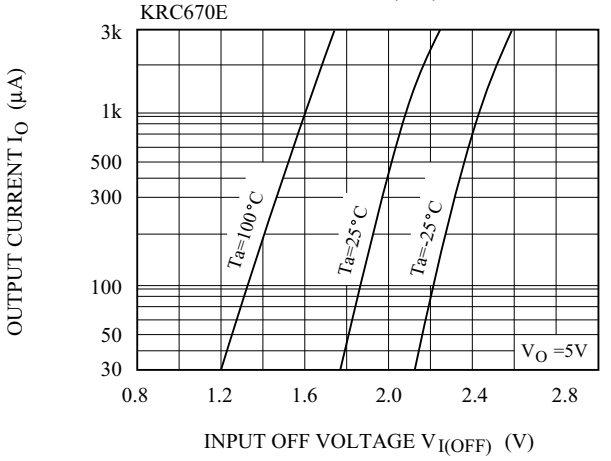
KRC670E



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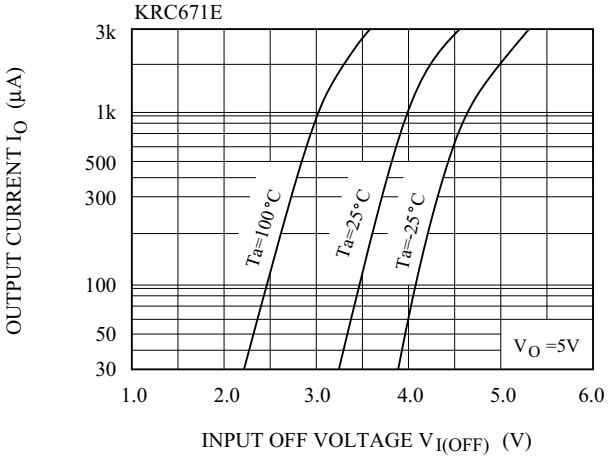
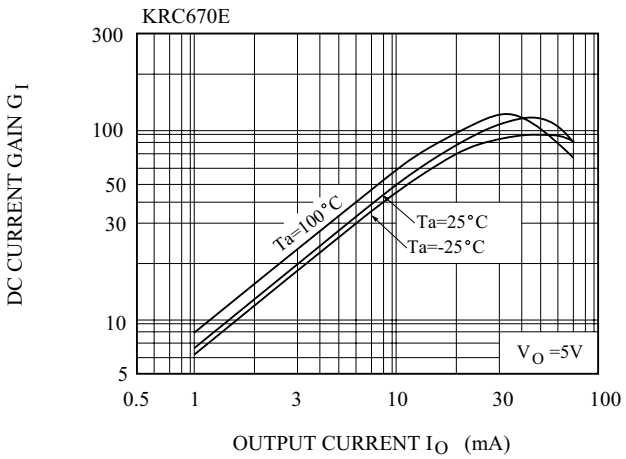
KRC671E



G_I - I_O

KRC670E



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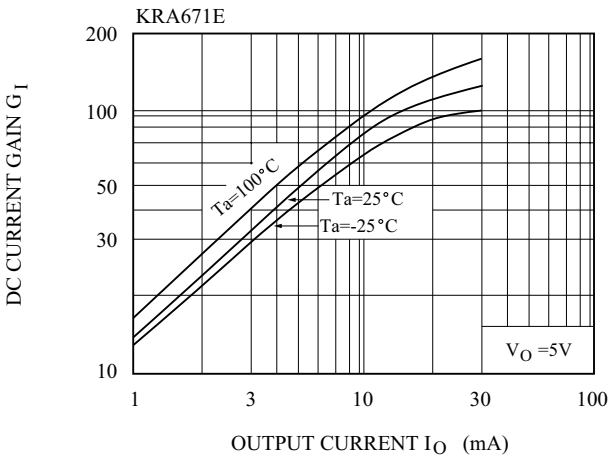

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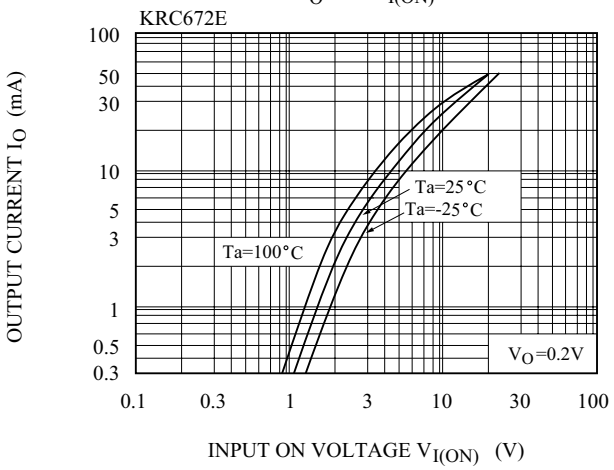

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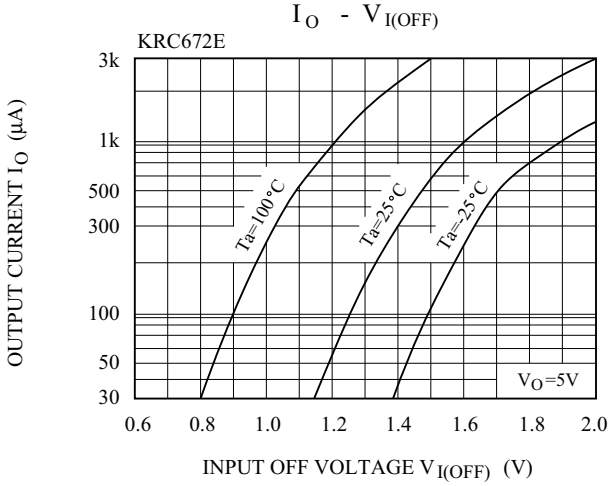

G_I - I_O