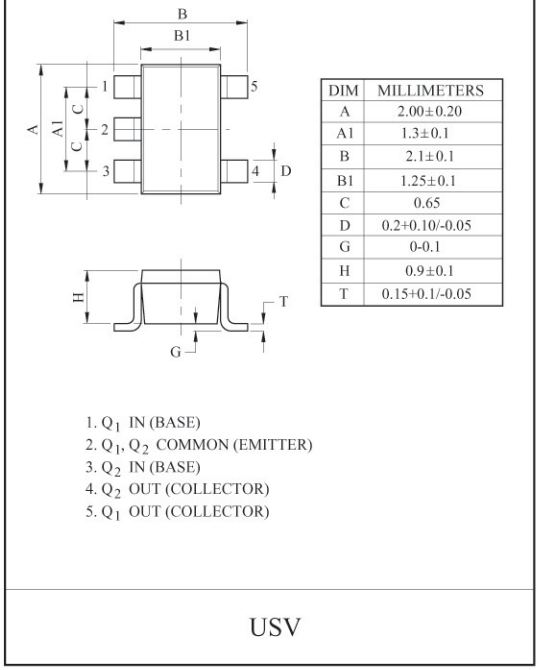
KRC666U~KRC672U

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.

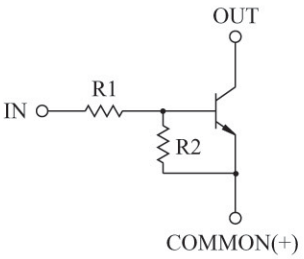


DIM	MILLIMETERS
A	2.00±0.20
A1	1.3±0.1
B	2.1±0.1
B1	1.25±0.1
C	0.65
D	0.2+0.10/-0.05
G	0-0.1
H	0.9±0.1
T	0.15+0.1/-0.05

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)

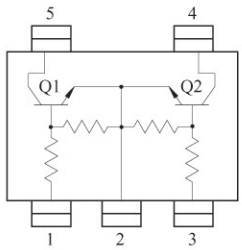
USV

EQUIVALENT CIRCUIT



TYPE NO.	R1(kΩ)	R2(kΩ)
KRC666U	1	10
KRC667U	2.2	2.2
KRC668U	2.2	10
KRC669U	4.7	10
KRC670U	10	4.7
KRC671U	47	10
KRC672U	100	100

EQUIVALENT CIRCUIT (TOP VIEW)

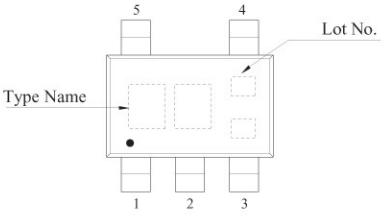


MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC666U 672U	V_O	50	V
Input Voltage	KRC666U	V_I	10, -5	V
	KRC667U		12, -10	
	KRC668U		12,-5	
	KRC669U		20, -7	
	KRC670U		30, -10	
	KRC671U		40, -15	
	KRC672U		40, -10	
Output Current	KRC666U~672U	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

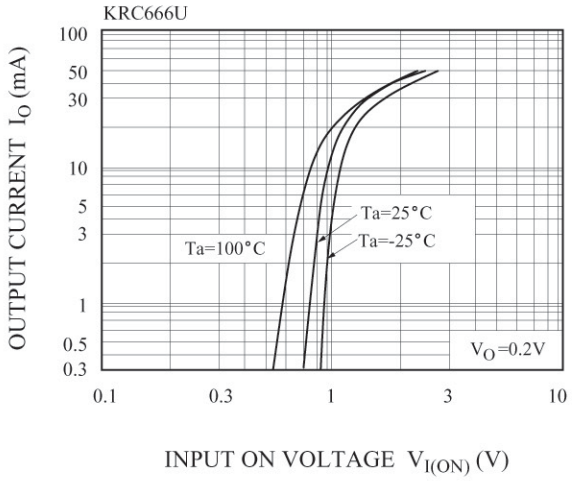
TYPE	KRC666U	KRC667U	KRC668U	KRC669U	KRC670U	KRC671U	KRC672U
MARK	N2	N4	N5	N6	N7	N8	N9

ELECTRICAL CHARACTERISTICS (Ta=25℃)

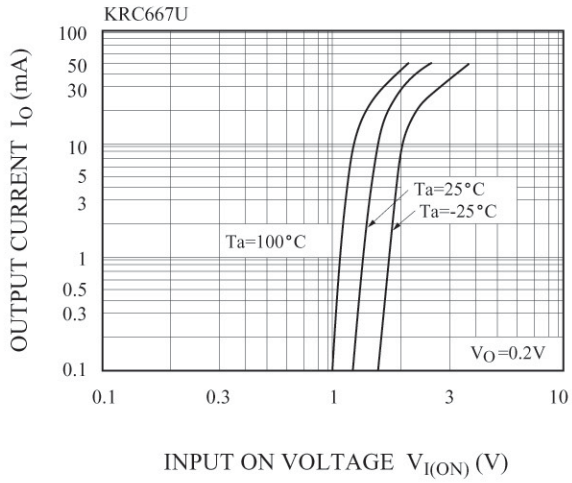
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC666U~672U	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC666U	G_I	V_O=5V, I_O=5mA	33	-	-	
	KRC667U		V_O=5V, I_O=20mA	20	-	-	
	KRC668U		V_O=5V, I_O=10mA	33	-	-	
	KRC669U		V_O=5V, I_O=10mA	30	-	-	
	KRC670U		V_O=5V, I_O=10mA	24	-	-	
	KRC671U		V_O=5V, I_O=5mA	33	-	-	
	KRC672U		V_O=5V, I_O=5mA	62	-	-	
Output Voltage	KRC666U	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	-	0.3	V
	KRC667U		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC668U		I_O=10mA, I_I=0.5mA	-	-	0.3	
	KRC669U		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC670U		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC671U		I_O=10mA, I_I=0.5mA	-	0.1	0.3	
	KRC672U		I_O=5mA, I_I=0.25mA	-	0.1	0.3	
Input Voltage (ON)	KRC666U	$V_{I(ON)}$	V_O=0.3V, I_O=20mA	-	0.98	3	V
	KRC667U		V_O=0.3V, I_O=20mA	-	1.83	3	
	KRC668U		V_O=0.3V, I_O=20mA	-	1.22	3	
	KRC669U		V_O=0.3V, I_O=20mA	-	1.76	2.5	
	KRC670U		V_O=0.3V, I_O=2mA	-	2	3	
	KRC671U		V_O=0.3V, I_O=2mA	-	3.9	5	
	KRC672U		V_O=0.3V, I_O=1mA	-	1.64	3	
Input Voltage (OFF)	KRC666U	$V_{I(OFF)}$	V_{CC}=5V, I_O=100μA	0.3	0.63	-	V
	KRC667U			0.5	1.15	-	
	KRC668U			0.3	0.67	-	
	KRC669U			0.3	0.82	-	
	KRC670U			0.8	1.68	-	
	KRC671U			1	3.09	-	
	KRC672U			0.5	1.17	-	
Transition Frequency	KRC666U~672U	f_T*	V_O=10V, I_O=5mA	-	250	-	MHz
Input Current	KRC666U	I_I	V_I=5V	-	-	7.2	mA
	KRC667U			-	-	3.8	
	KRC668U			-	-	3.8	
	KRC669U			-	-	1.8	
	KRC670U			-	-	0.88	
	KRC671U			-	-	0.16	
	KRC672U			-	-	0.15	
Input Resistor	KRC666U	R1	-	0.7	1	1.3	kΩ
	KRC667U			1.54	2.2	2.86	
	KRC668U			1.54	2.2	2.86	
	KRC669U			3.29	4.7	6.11	
	KRC670U			7	10	13	
	KRC671U			32.9	47	61.1	
	KRC672U			70	100	130	
Resistor Ratio	KRC666U	R2/R1	-	8	10	12	
	KRC667U			0.8	1.0	1.2	
	KRC668U			3.6	4.5	5.5	
	KRC669U			1.7	2.1	2.6	
	KRC670U			0.37	0.47	0.57	
	KRC671U			0.17	0.21	0.26	
	KRC672U			0.8	1.0	1.2	

Note : * Characteristic of Transistor Only.

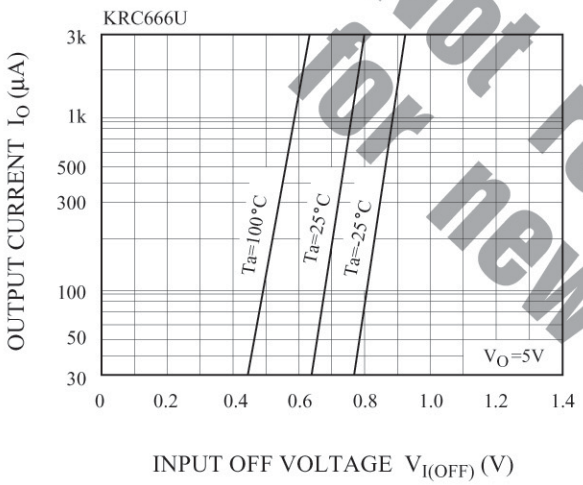
I_O - $V_{I(ON)}$



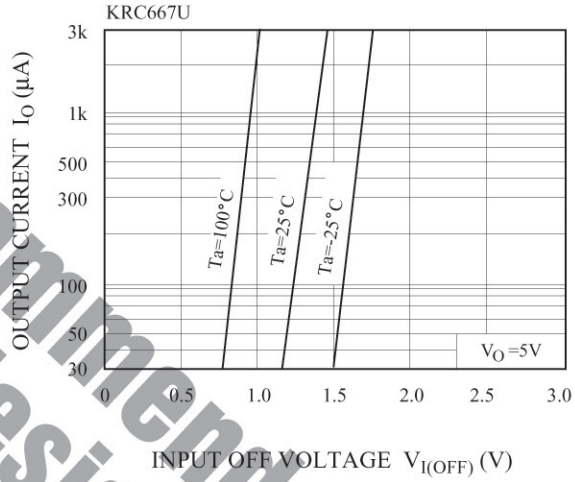
I_O - $V_{I(ON)}$



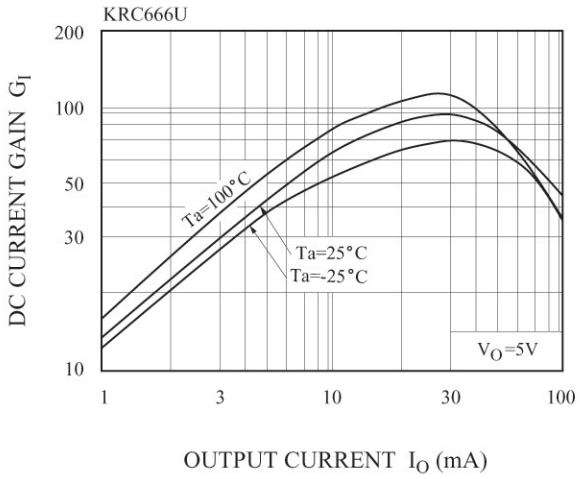
I_O - $V_{I(OFF)}$



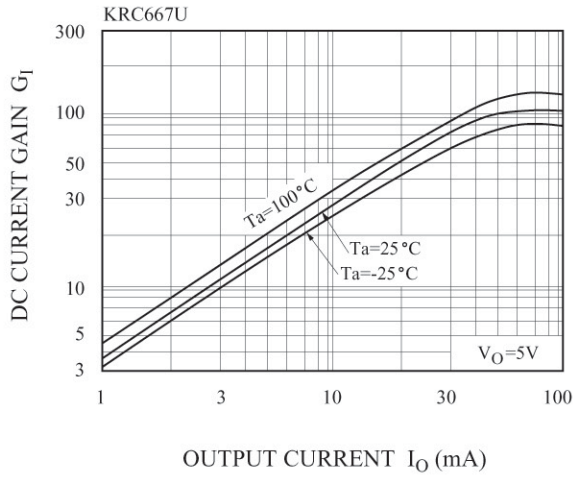
I_O - $V_{I(OFF)}$



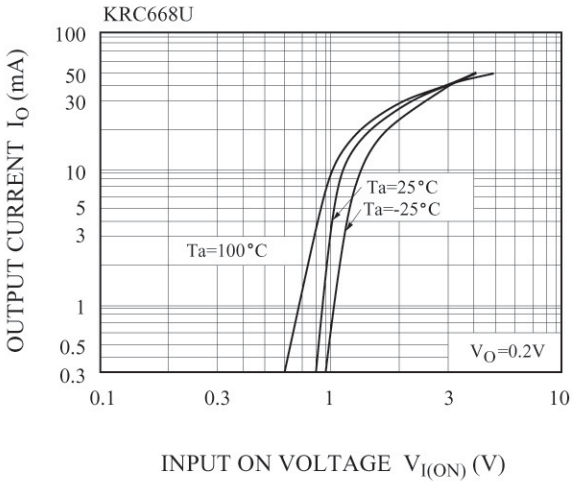
G_I - I_O



G_I - I_O



I_O - $V_{I(ON)}$



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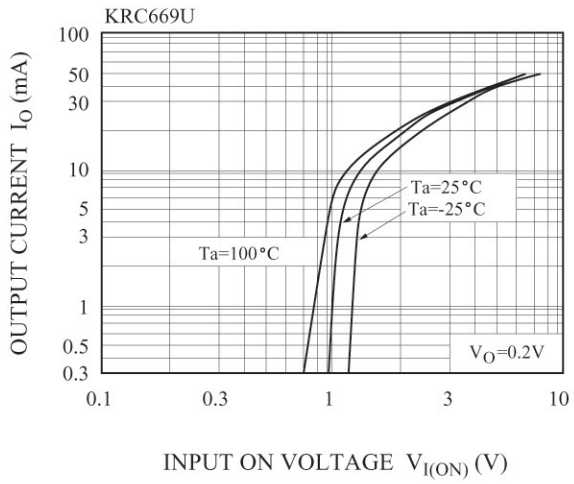

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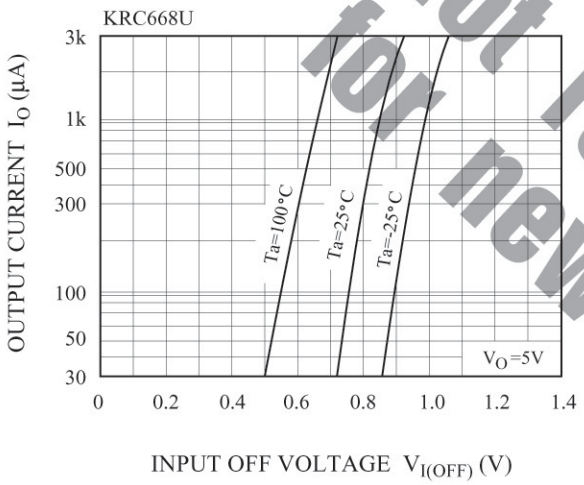

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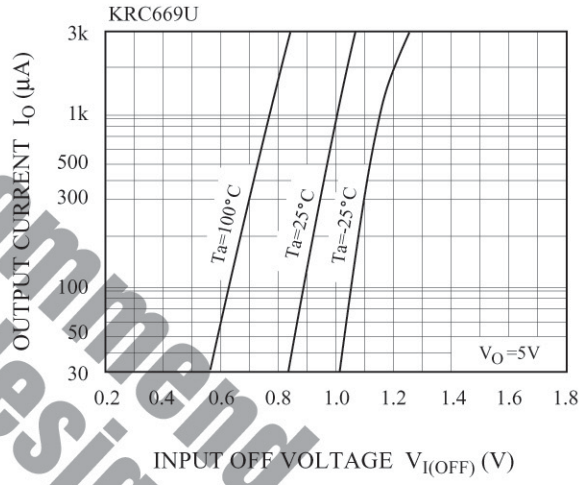

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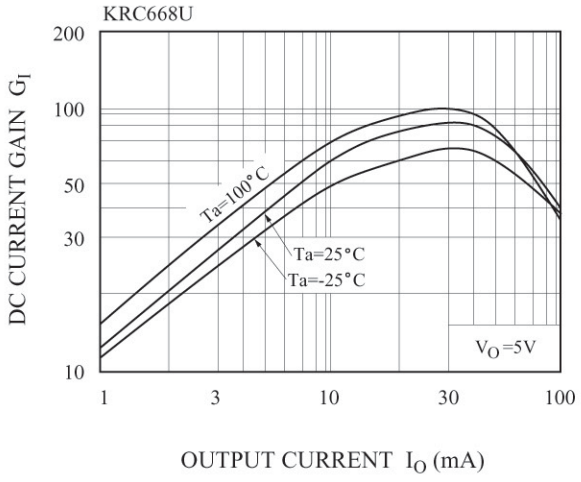

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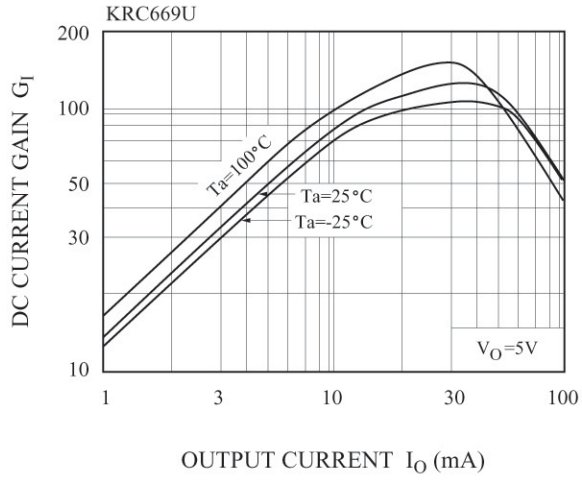

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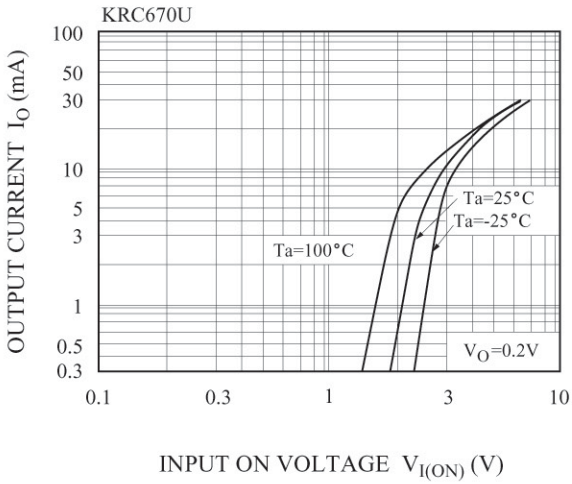

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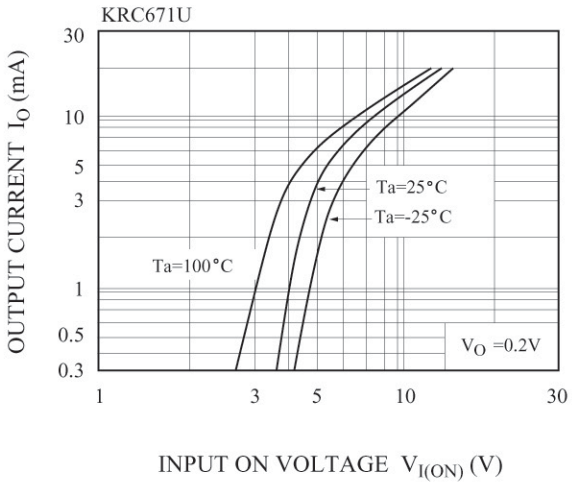

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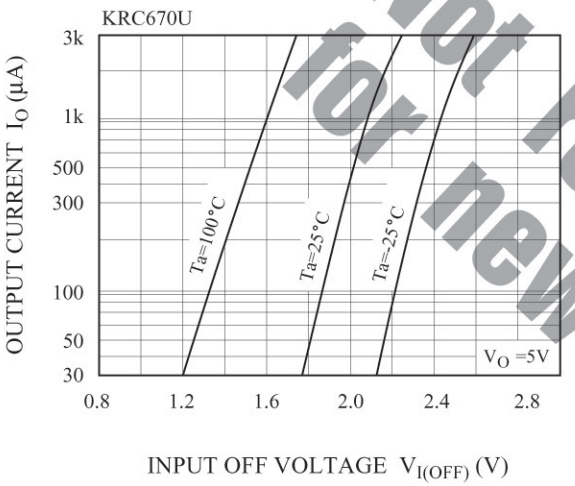

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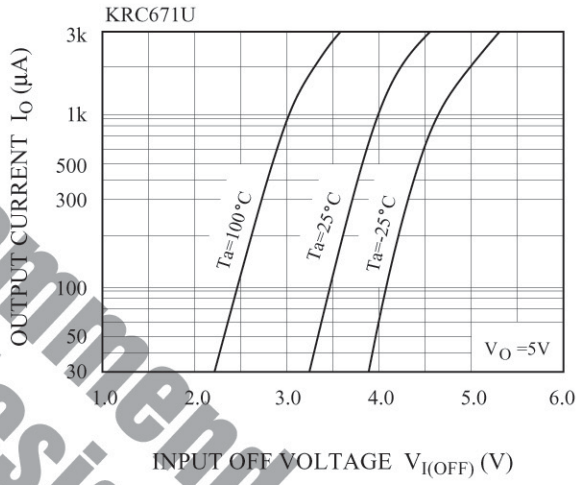

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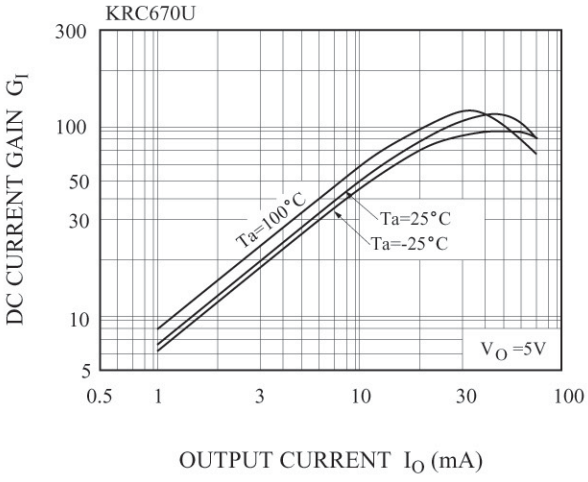

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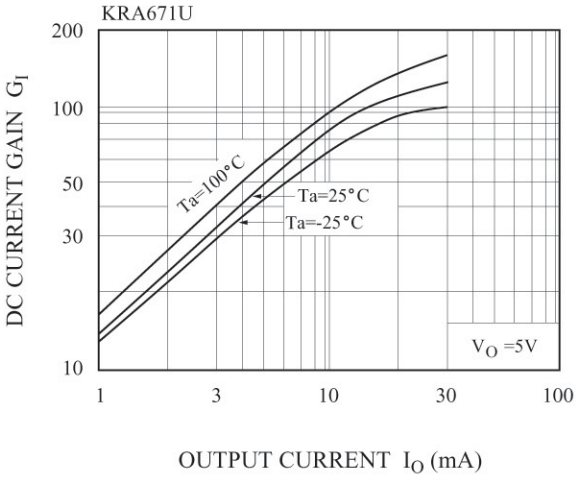

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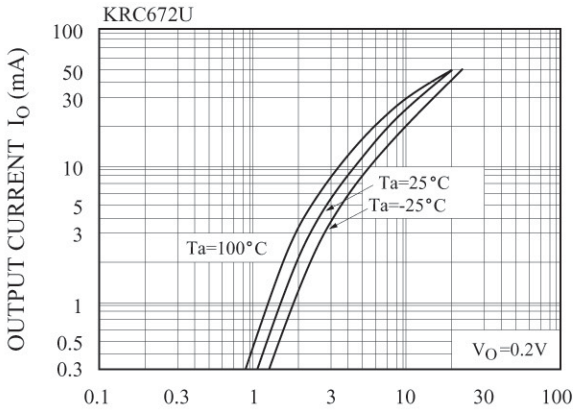

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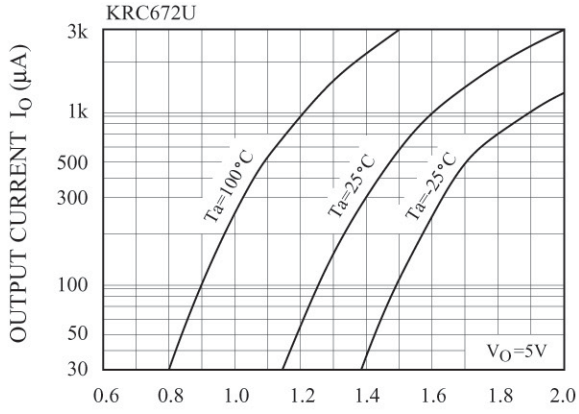

G_I - I_O