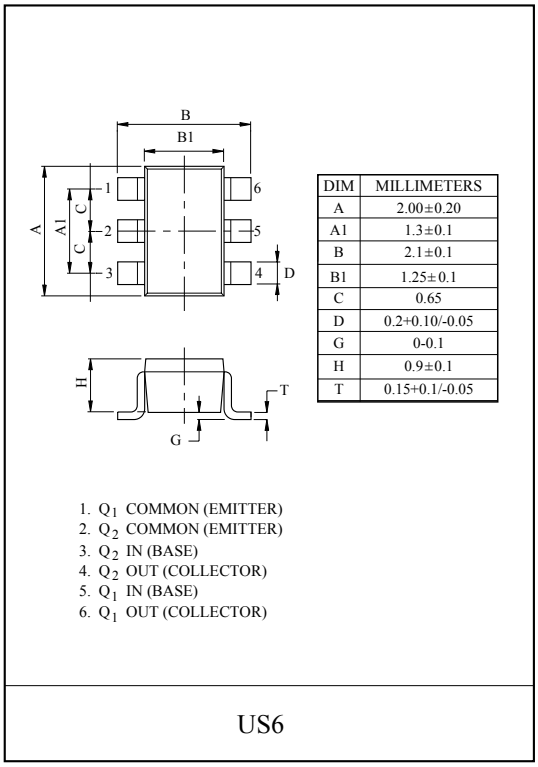
KRC821U~KRC826U

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.

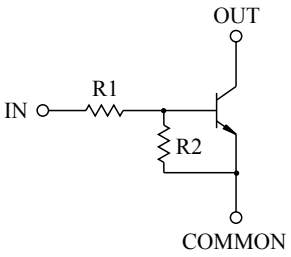


DIM	MILLIMETERS
A	2.00±0.20
A1	1.3±0.1
B	2.1±0.1
B1	1.25±0.1
C	0.65
D	0.2+0.10/-0.05
G	0-0.1
H	0.9±0.1
T	0.15+0.1/-0.05

1. Q_1 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)

US6

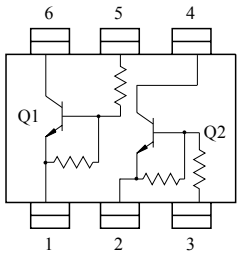
EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC821U	4.7	4.7
KRC822U	10	10
KRC823U	22	22
KRC824U	47	47
KRC825U	2.2	47
KRC826U	4.7	47

EQUIVALENT CIRCUIT (TOP VIEW)

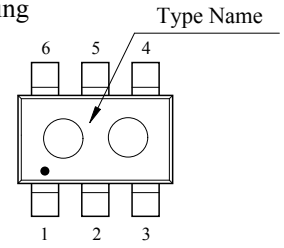


MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC821U~826U	V_O	50	V
Input Voltage	KRC821U	V_I	20, -10	V
	KRC822U		30, -10	
	KRC823U		40, -10	
	KRC824U		40, -10	
	KRC825U		12, -5	
	KRC826U		20, -5	
Output Current	KRC821U~826U	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	KRC821U	KRC822U	KRC823U	KRC824U	KRC825U	KRC826U
MARK	YA	YB	YC	YD	YE	YF

ELECTRICAL CHARACTERISTICS (Ta=25℃)

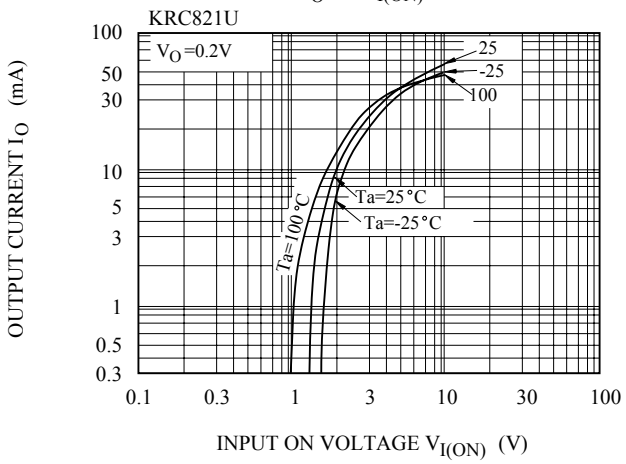
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC821U～826U	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC821U	G_I	V_O=5V, I_O=10mA	30	55	-	
	KRC822U			50	80	-	
	KRC823U			70	120	-	
	KRC824U			80	200	-	
	KRC825U			80	200	-	
	KRC826U			80	200	-	
Output Voltage	KRC821U～826U	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)	KRC821U	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.5	2.0	V
	KRC822U			-	1.8	2.4	
	KRC823U			-	2.1	3.0	
	KRC824U			-	2.8	5.0	
	KRC825U			-	0.8	1.1	
	KRC826U			-	0.9	1.3	
Input Votlage (OFF)	KRC821U～824U	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	1.0	1.2	-	V
	KRC825U～826U			0.5	0.65	-	
Transition Frequency	KRC821U～826U	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current	KRC821U	I_I	V_I=5V	-	-	1.8	mA
	KRC822U			-	-	0.88	
	KRC823U			-	-	0.36	
	KRC824U			-	-	0.18	
	KRC825U			-	-	3.6	
	KRC826U			-	-	1.8	

Note : * Characteristic of Transistor Only.

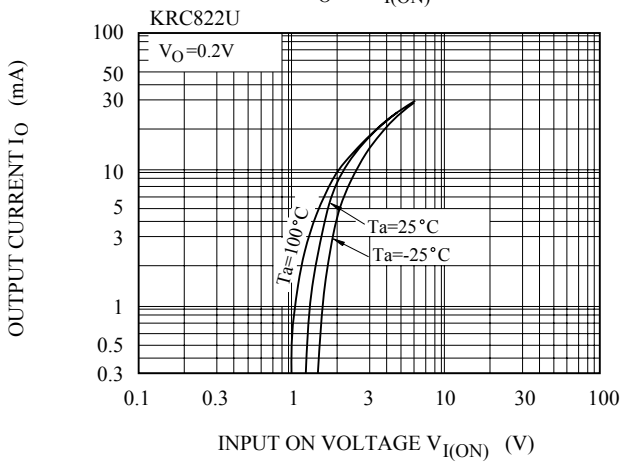
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC821U	t_r	V_O=5V V_{IN}=5V R_L=1kΩ	-	0.03	-	μS
		KRC822U			-	0.05	-	
		KRC823U			-	0.12	-	
		KRC824U			-	0.22	-	
		KRC825U			-	0.01	-	
		KRC826U			-	0.03	-	
	Storage Time	KRC821U	t_{stg}		-	2.0	-	
		KRC822U			-	2.0	-	
		KRC823U			-	2.0	-	
		KRC824U			-	2.0	-	
		KRC825U			-	2.0	-	
		KRC826U			-	2.0	-	
	Fall Time	KRC821U	t_f		-	0.12	-	
		KRC822U			-	0.36	-	
		KRC823U			-	0.35	-	
		KRC824U			-	0.6	-	
		KRC825U			-	0.1	-	
		KRC826U			-	0.19	-	

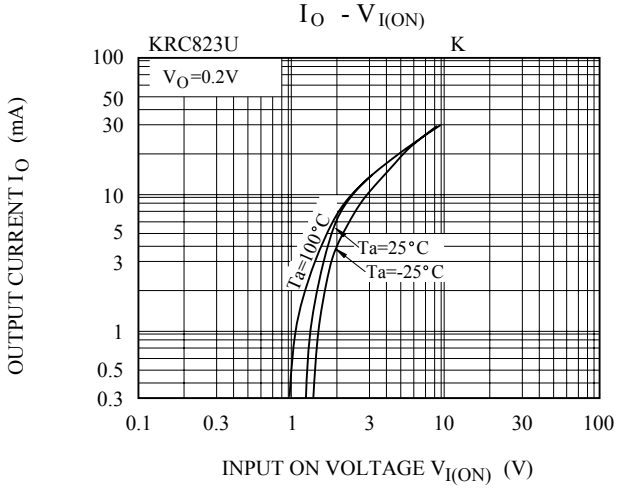
I_O - $V_{I(ON)}$



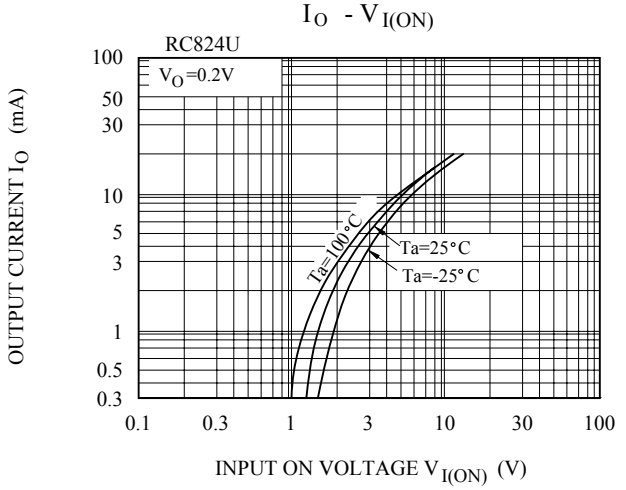
I_O - $V_{I(ON)}$



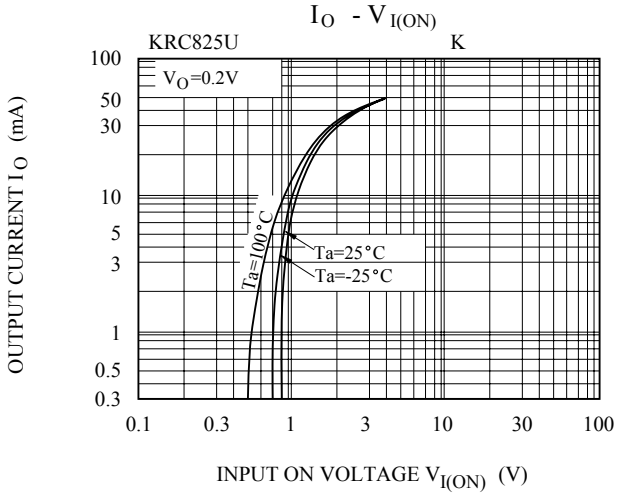
I_O - $V_{I(ON)}$



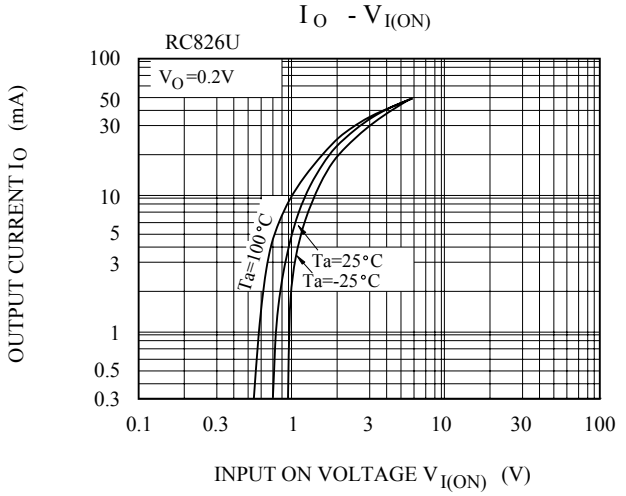
I_O - $V_{I(ON)}$



I_O - $V_{I(ON)}$

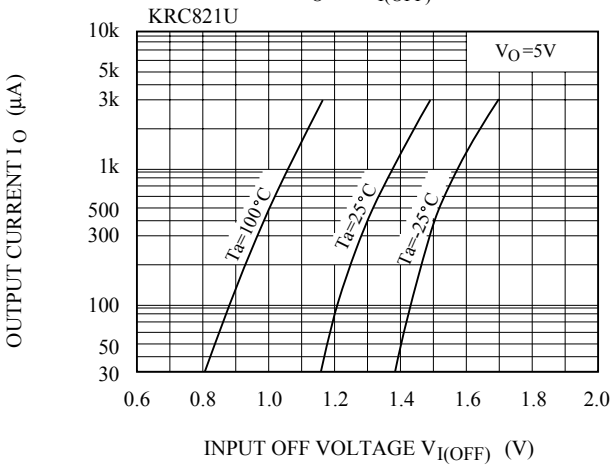


I_O - $V_{I(ON)}$



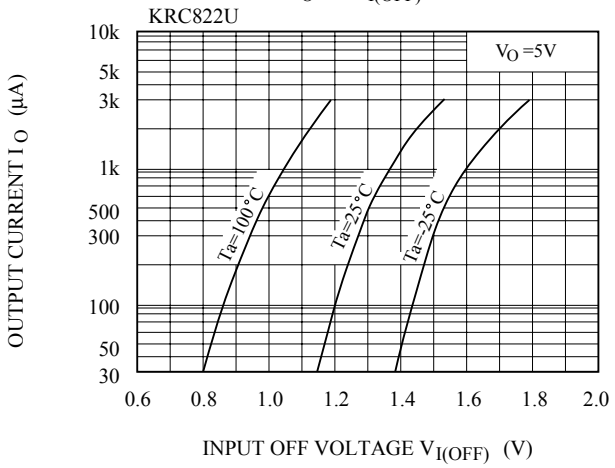
I_O - $V_{I(OFF)}$

KRC821U



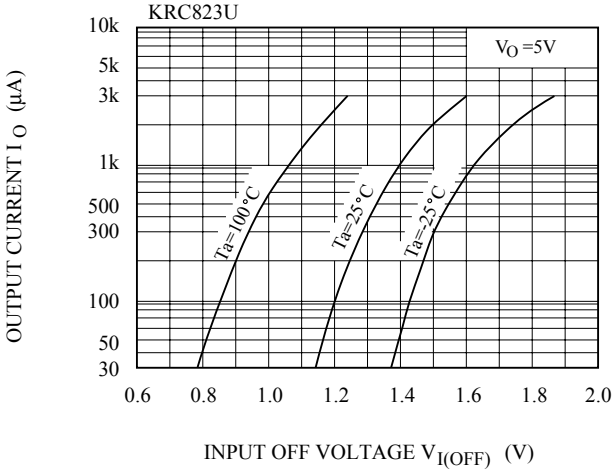
I_O - $V_{I(OFF)}$

KRC822U



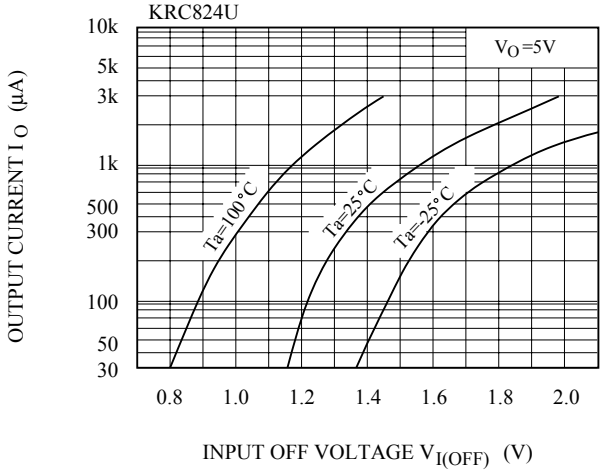
I_O - $V_{I(OFF)}$

KRC823U



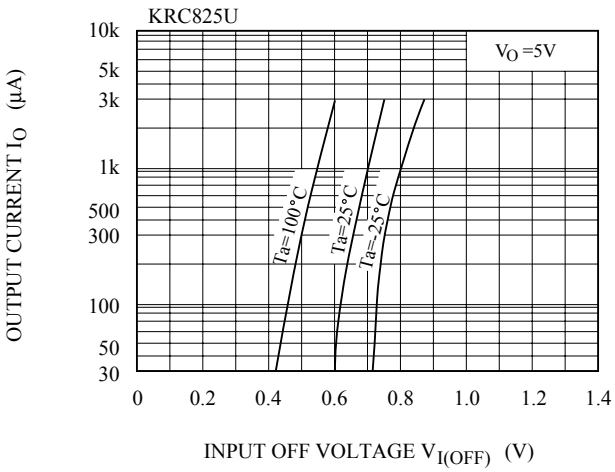
I_O - $V_{I(OFF)}$

KRC824U



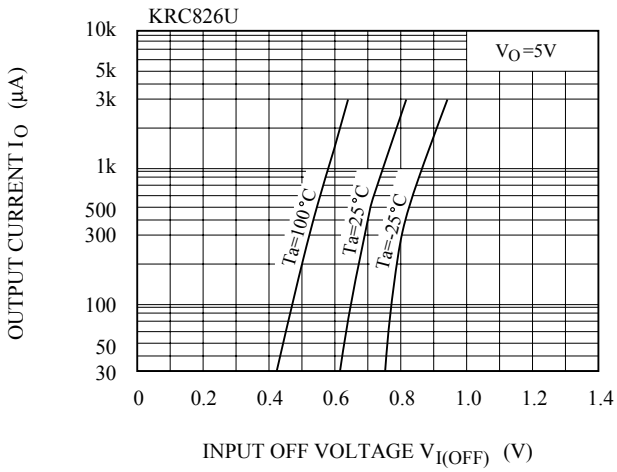
I_O - $V_{I(OFF)}$

KRC825U



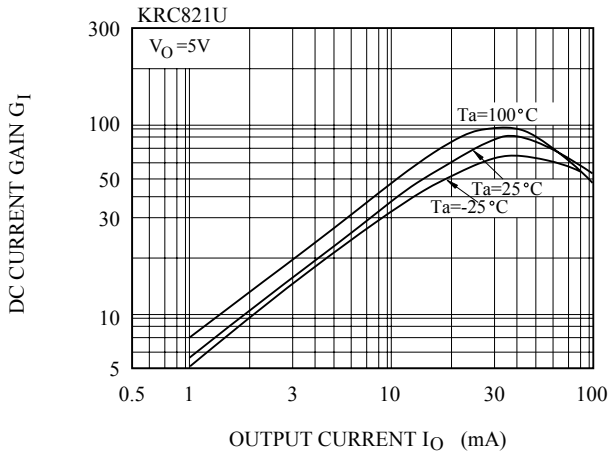
I_O - $V_{I(OFF)}$

KRC826U



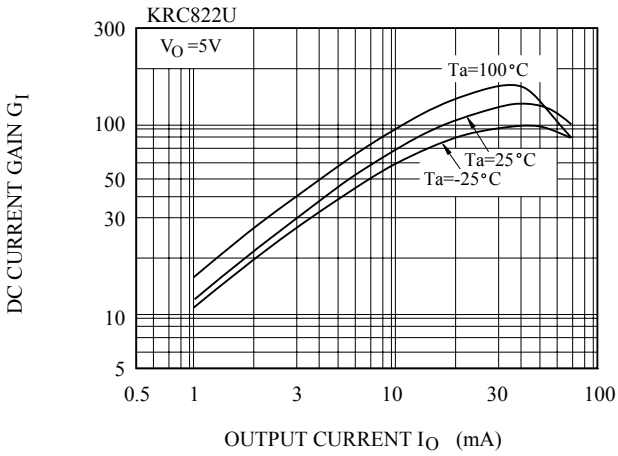
G_I - I_O

KRC821U



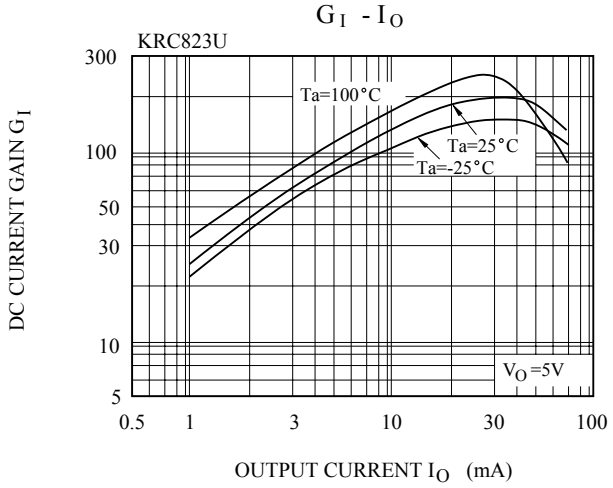
G_I - I_O

KRC822U



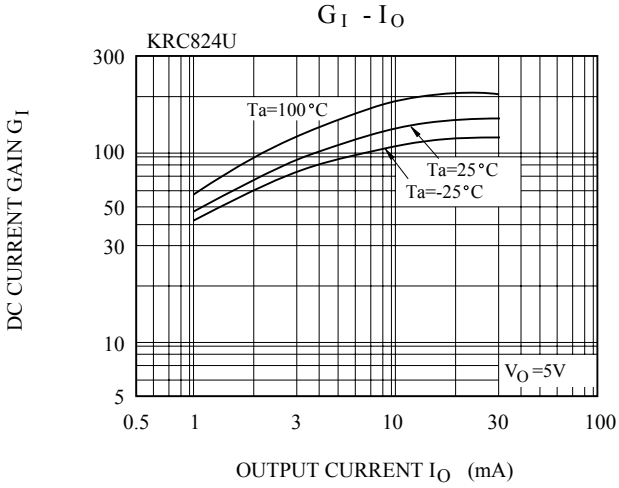
G_I - I_O

KRC823U



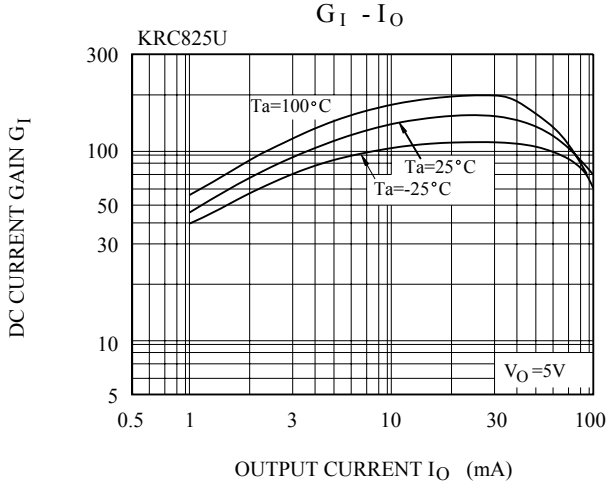
G_I - I_O

KRC824U



G_I - I_O

KRC825U



G_I - I_O

KRC826U