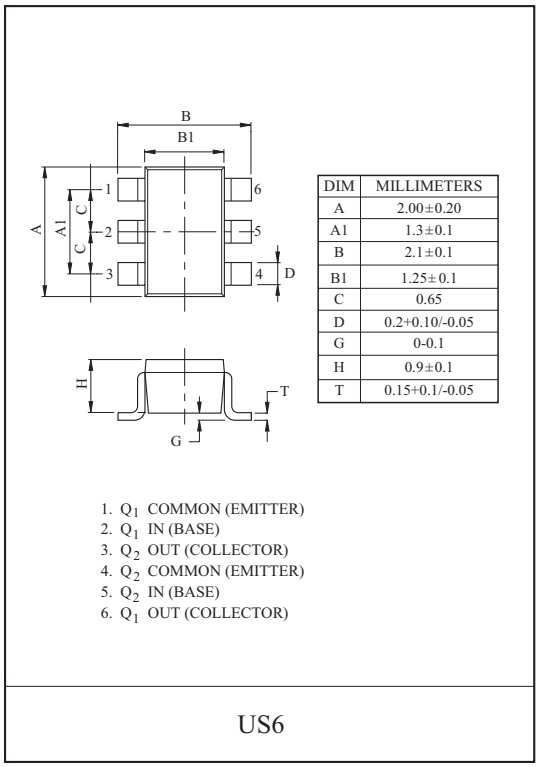
KRC851U~KRC856U

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.

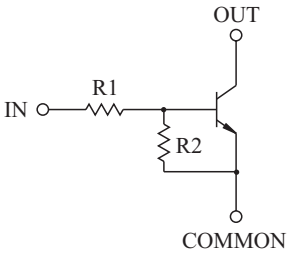


DIM	MILLIMETERS
A	2.00±0.20
A1	1.3±0.1
B	2.1±0.1
B1	1.25±0.1
C	0.65
D	0.2+0.10/-0.05
G	0-0.1
H	0.9±0.1
T	0.15+0.1/-0.05

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

US6

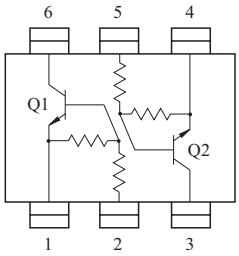
EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC851U	4.7	4.7
KRC852U	10	10
KRC853U	22	22
KRC854U	47	47
KRC855U	2.2	47
KRC856U	4.7	47

EQUIVALENT CIRCUIT (TOP VIEW)

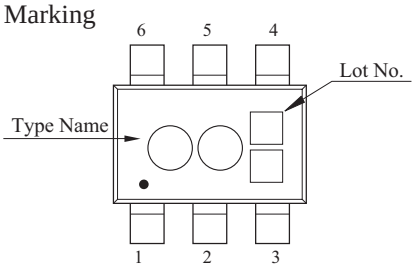


MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC851U~856U	V_O	50	V
Input Voltage	KRC851U	V_I	20, -10	V
	KRC852U		30, -10	
	KRC853U		40, -10	
	KRC854U		40, -10	
	KRC855U		12, -5	
	KRC856U		20, -5	
Output Current	KRC851U~856U	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	KRC851U	KRC852U	KRC853U	KRC854U	KRC855U	KRC856U
MARK	NA	NB	NC	ND	NE	NF

ELECTRICAL CHARACTERISTICS (Ta=25℃)

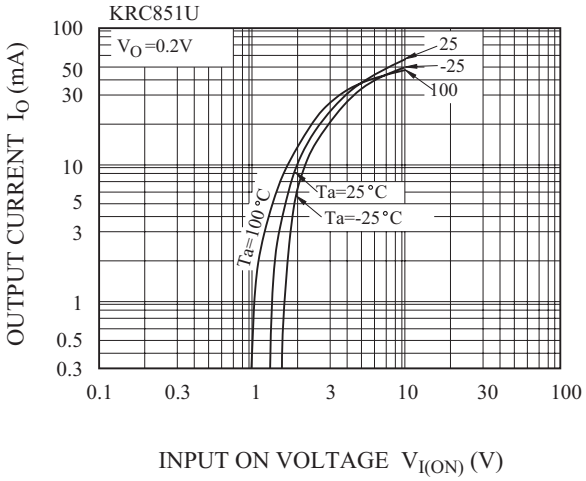
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC851U~856U	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain	KRC851U	G_I	V_O=5V, I_O=10mA	30	55	-	
	KRC852U			50	80	-	
	KRC853U			70	120	-	
	KRC854U			80	200	-	
	KRC855U			80	200	-	
	KRC856U			80	200	-	
Output Voltage	KRC851U~856U	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)	KRC851U	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.5	2.0	V
	KRC852U			-	1.8	2.4	
	KRC853U			-	2.1	3.0	
	KRC854U			-	2.8	5.0	
	KRC855U			-	0.8	1.1	
	KRC856U			-	0.9	1.3	
Input Votlage (OFF)	KRC851U~854U	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	1.0	1.2	-	V
	KRC855U~856U			0.5	0.65	-	
Transition Frequency	KRC851U~856U	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current	KRC851U	I_I	V_I=5V	-	-	1.8	mA
	KRC852U			-	-	0.88	
	KRC853U			-	-	0.36	
	KRC854U			-	-	0.18	
	KRC855U			-	-	3.6	
	KRC856U			-	-	1.8	

Note : * Characteristic of Transistor Only.

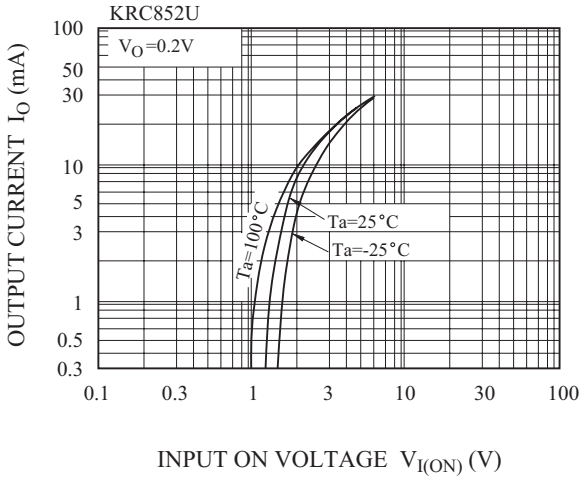
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Switching Time	Rise Time	KRC851U	t_r	V_O=5V V_{IN}=5V R_L=1k Ω	-	0.03	-	μS
		KRC852U			-	0.05	-	
		KRC853U			-	0.12	-	
		KRC854U			-	0.22	-	
		KRC855U			-	0.01	-	
		KRC856U			-	0.03	-	
	Storage Time	KRC851U	t_{stg}		-	2.0	-	
		KRC852U			-	2.0	-	
		KRC853U			-	2.0	-	
		KRC854U			-	2.0	-	
		KRC855U			-	2.0	-	
		KRC856U			-	2.0	-	
	Fall Time	KRC851U	t_f		-	0.12	-	
		KRC852U			-	0.36	-	
		KRC853U			-	0.35	-	
		KRC854U			-	0.6	-	
		KRC855U			-	0.1	-	
		KRC856U			-	0.19	-	

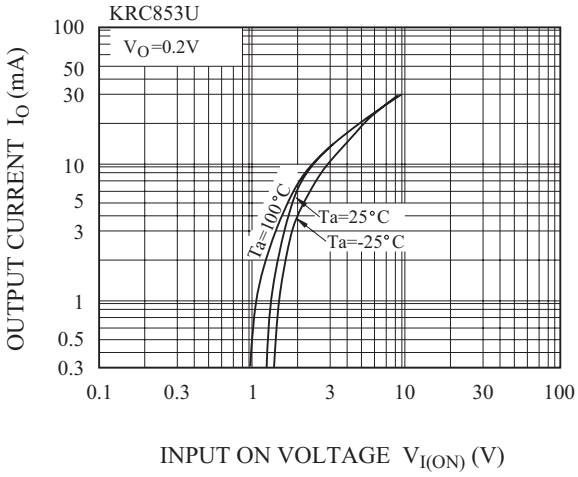
I_O - $V_{I(ON)}$



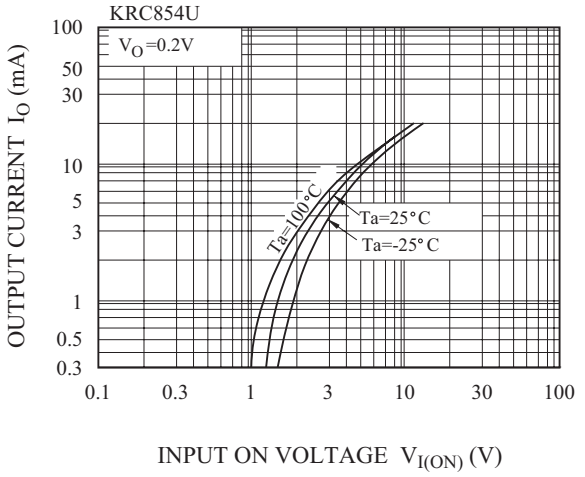
I_O - $V_{I(ON)}$



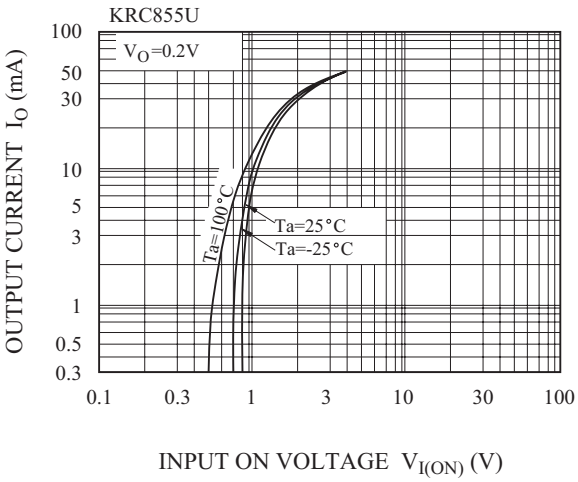
I_O - $V_{I(ON)}$



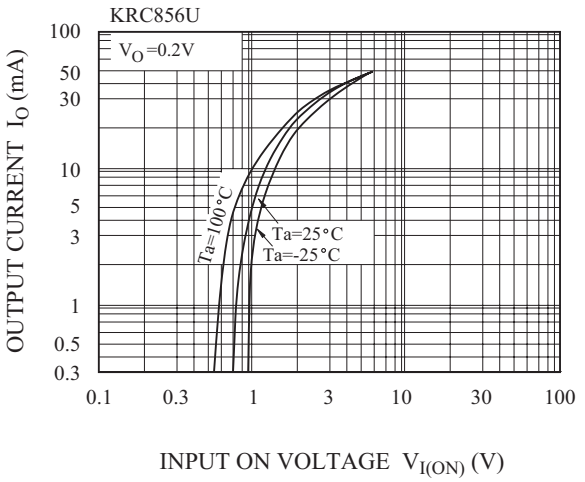
I_O - $V_{I(ON)}$



I_O - $V_{I(ON)}$

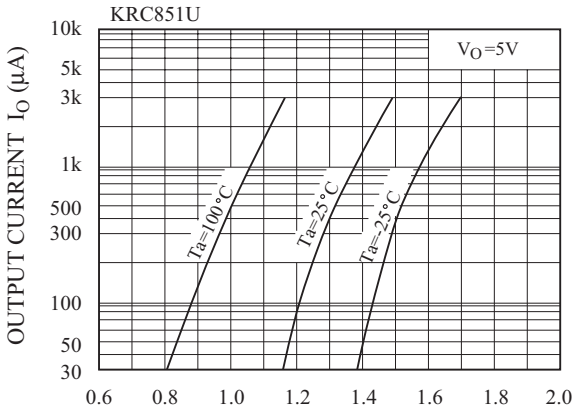


I_O - $V_{I(ON)}$



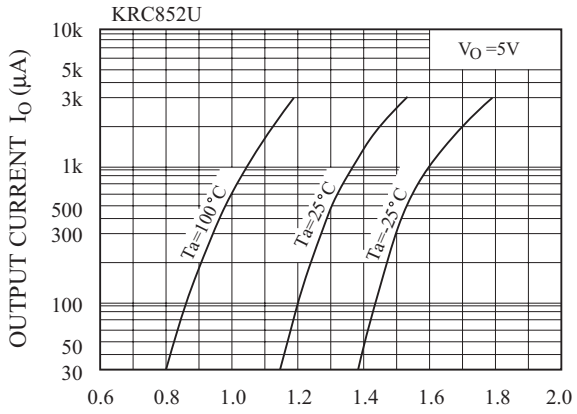
I_O - $V_{I(OFF)}$

KRC851U



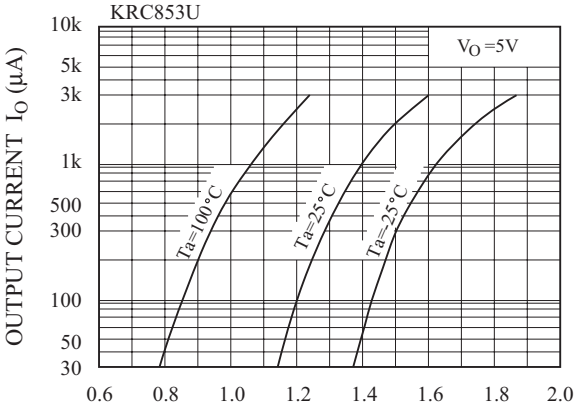
I_O - $V_{I(OFF)}$

KRC852U



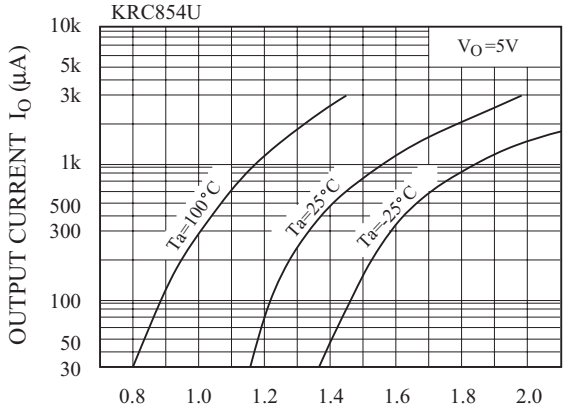
I_O - $V_{I(OFF)}$

KRC853U



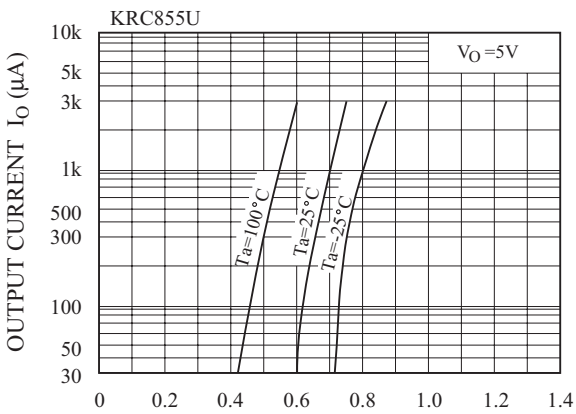
I_O - $V_{I(OFF)}$

KRC854U



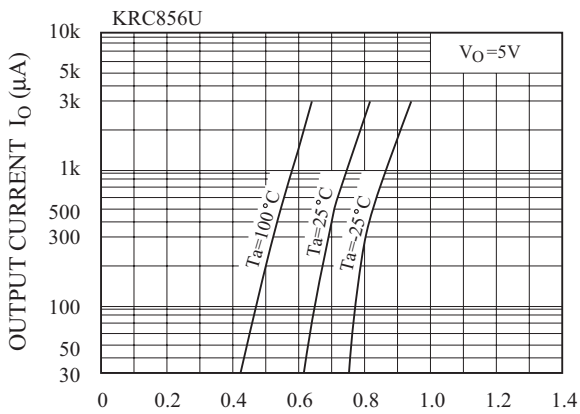
I_O - $V_{I(OFF)}$

KRC855U

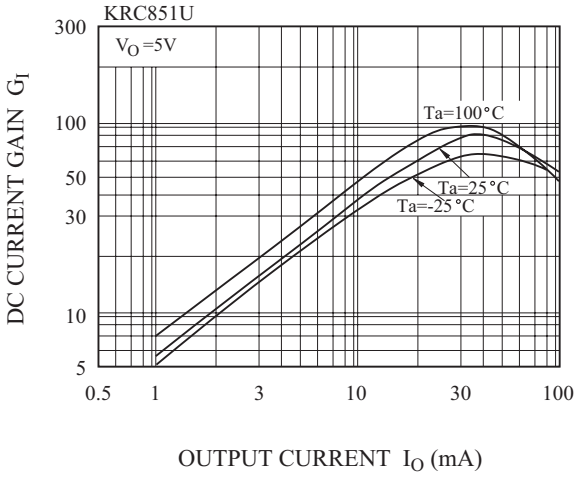


I_O - $V_{I(OFF)}$

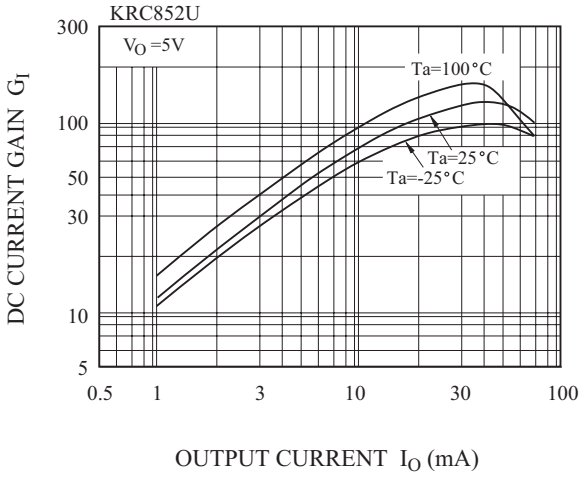
KRC856U



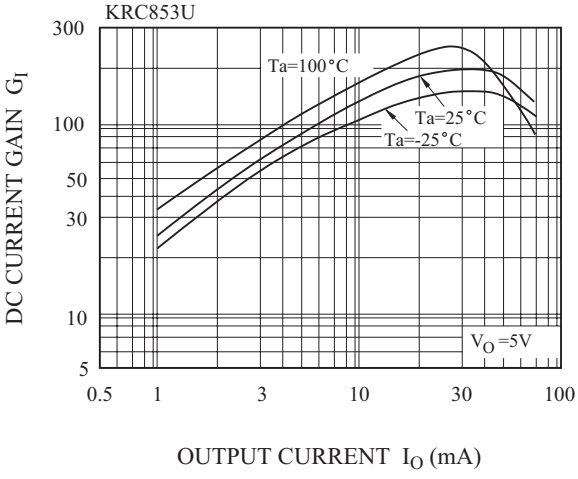
G_I - I_O



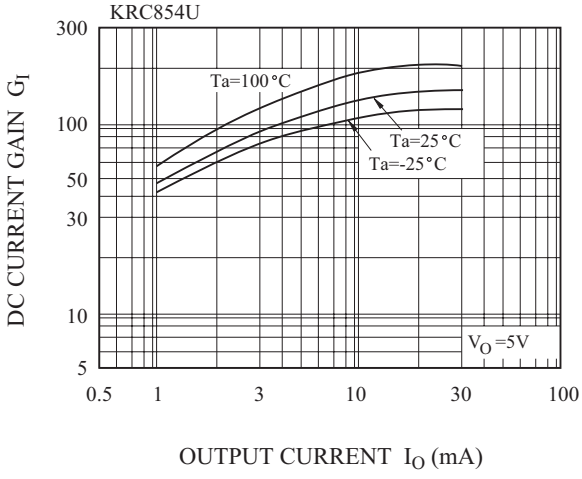
G_I - I_O



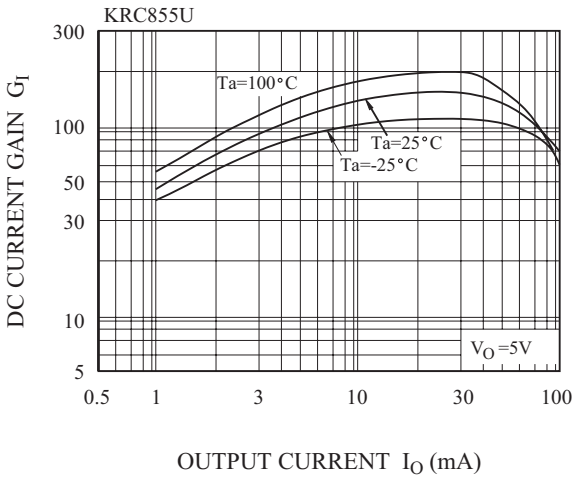
G_I - I_O



G_I - I_O



G_I - I_O



G_I - I_O