

KEC

SEMICONDUCTOR
TECHNICAL DATA

KRC836E~KRC842E

EPITAXIAL PLANAR NPN TRANSISTOR

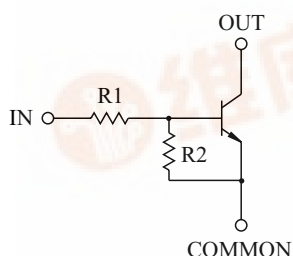
SWITCHING APPLICATION.

INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

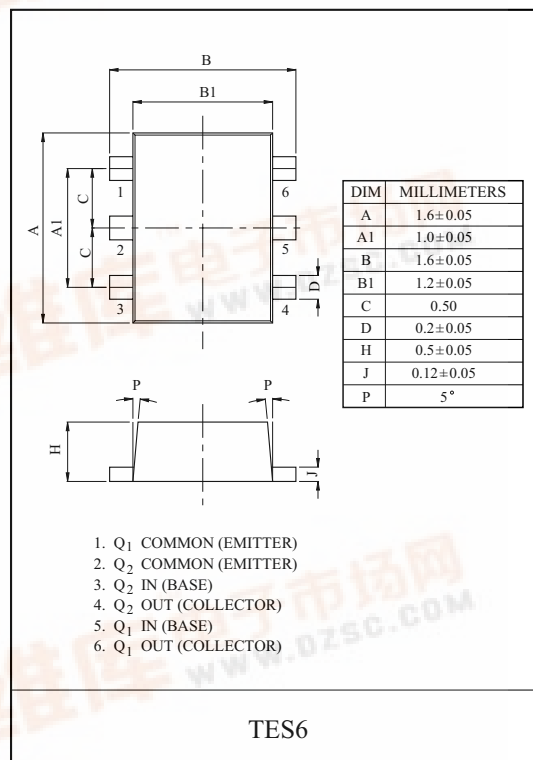
FEATURES

- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

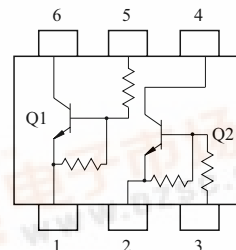
EQUIVALENT CIRCUIT



TYPE NO.	R1(k Ω)	R2(k Ω)
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	℃

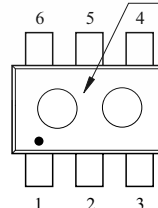
* Total Rating.

MARK SPEC

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

Marking

Type Name



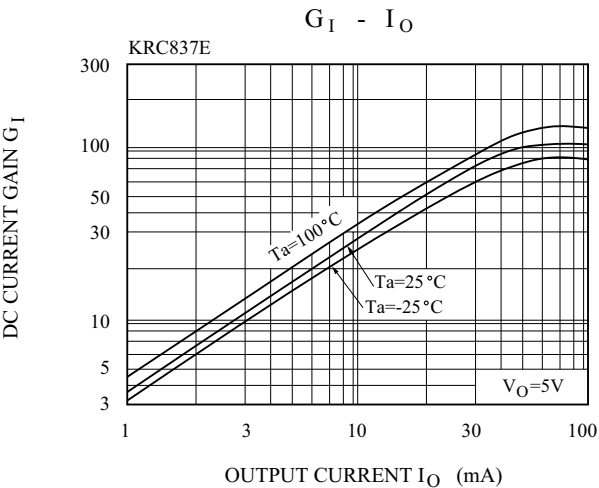
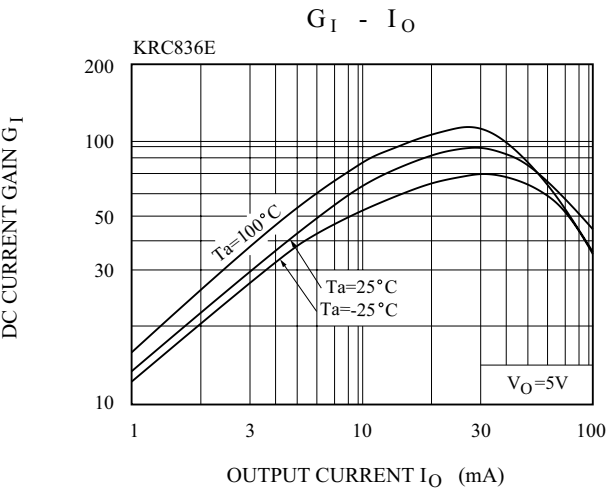
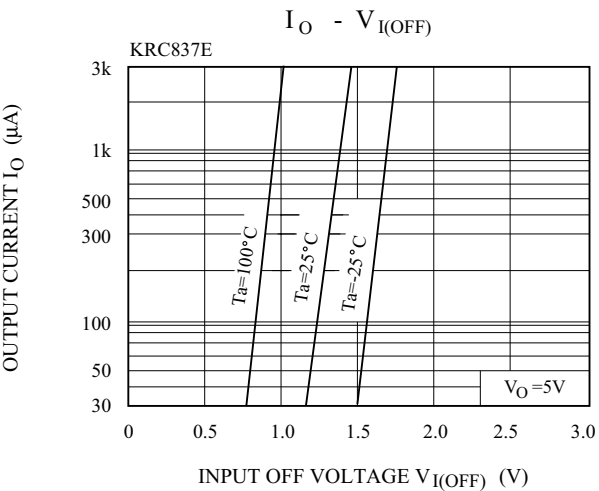
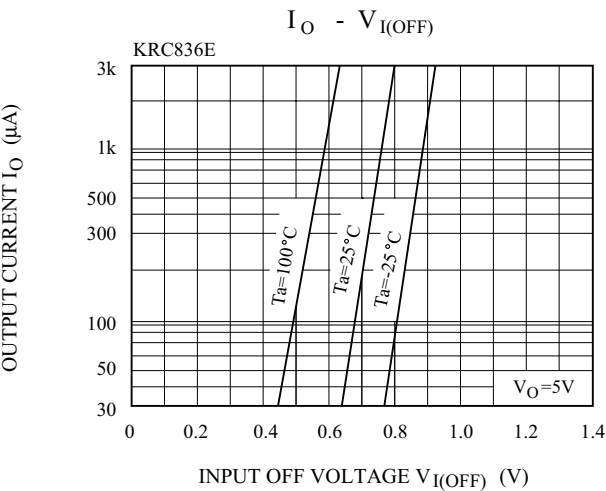
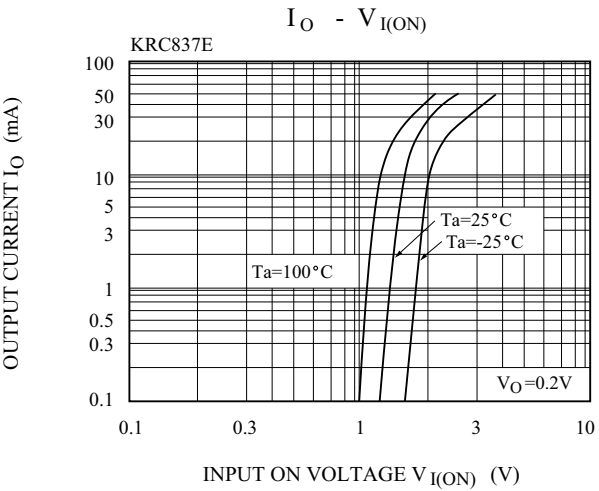
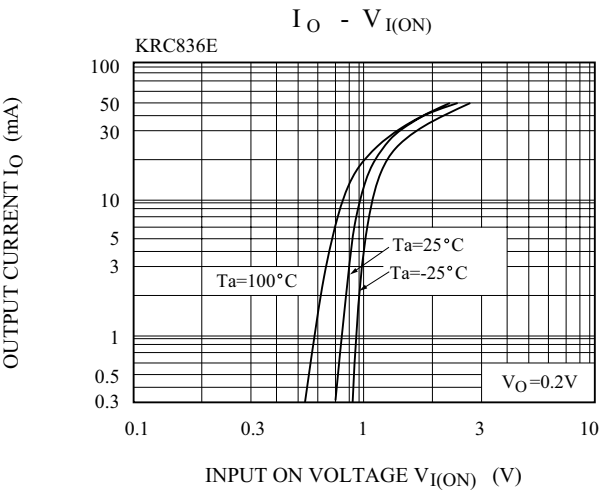
KRC836E~KRC842E

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

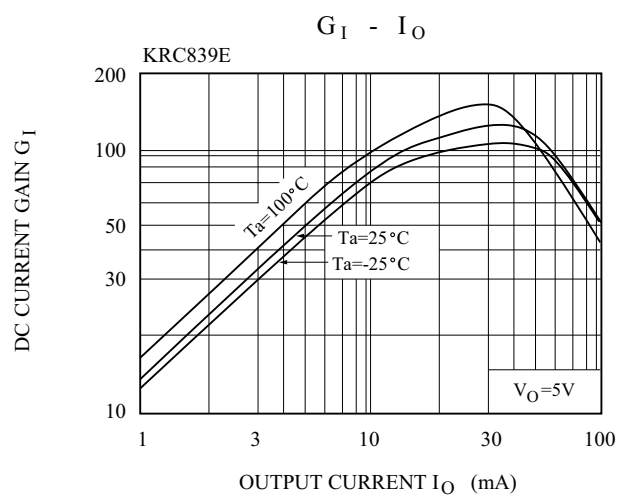
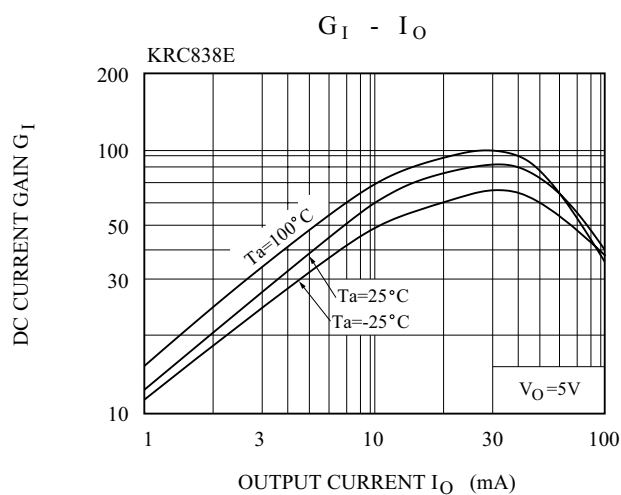
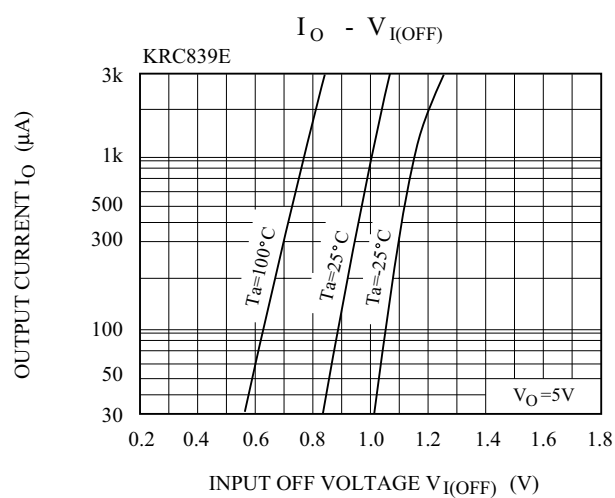
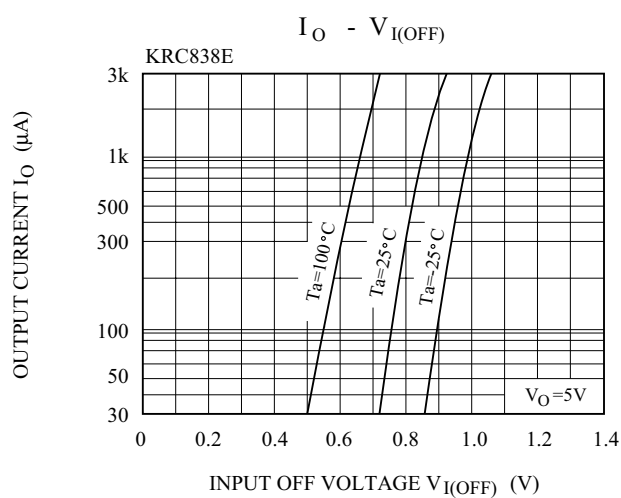
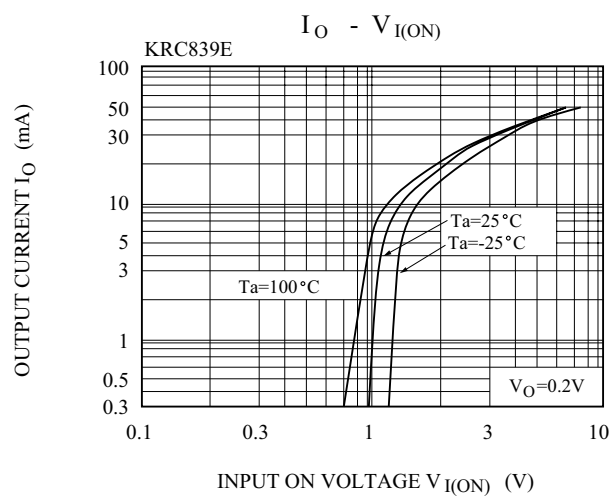
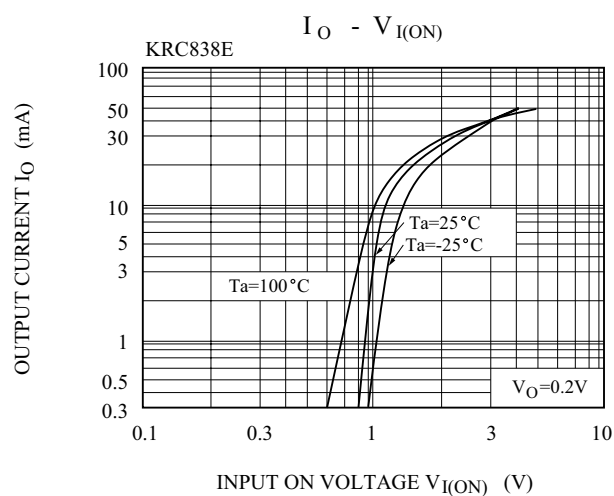
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC836E~842E	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	KRC836E	G_I	$V_O=5V, I_O=5mA$	33	-	-	
	KRC837E		$V_O=5V, I_O=20mA$	20	-	-	
	KRC838E		$V_O=5V, I_O=10mA$	33	-	-	
	KRC839E		$V_O=5V, I_O=10mA$	30	-	-	
	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	$V_{I(OFF)}$	$V_{CC}=5V, I_O=100\mu A$	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.

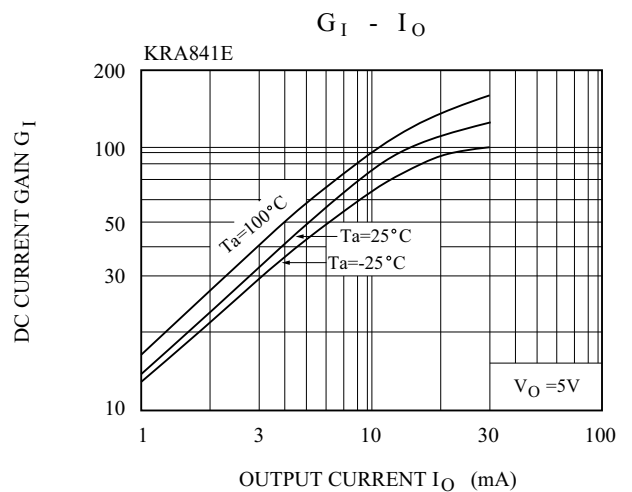
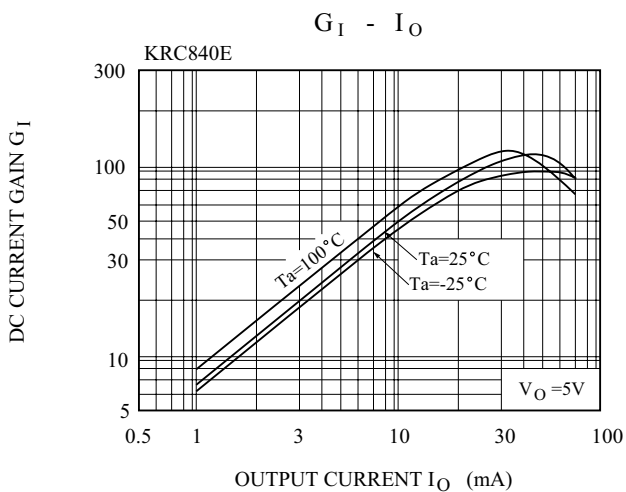
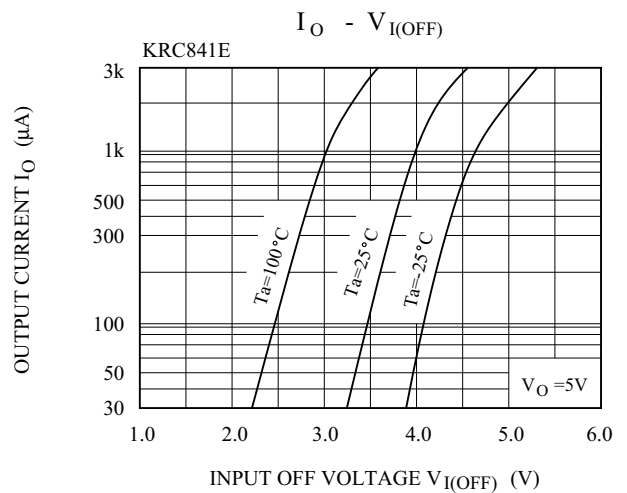
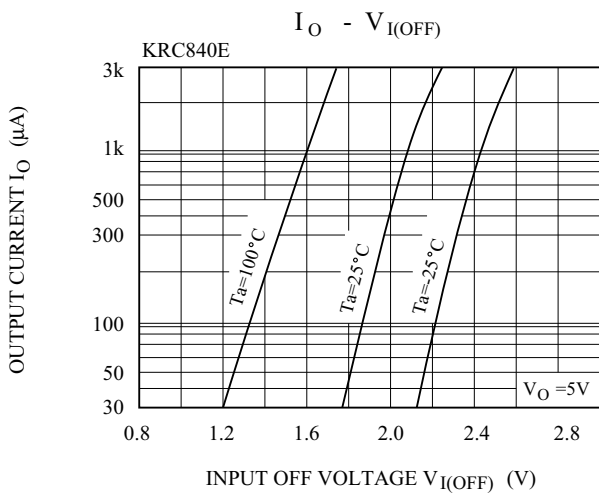
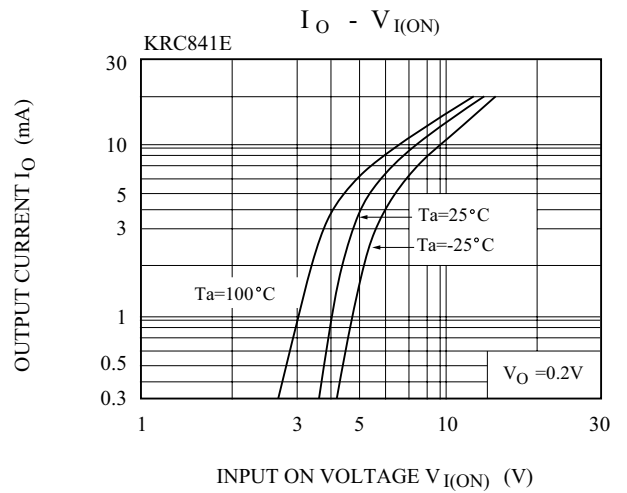
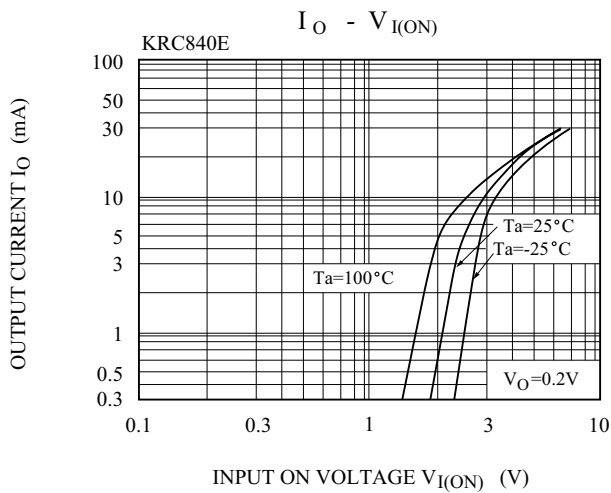
KRC836E~KRC842E



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