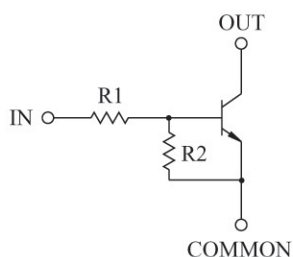


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

FEATURES

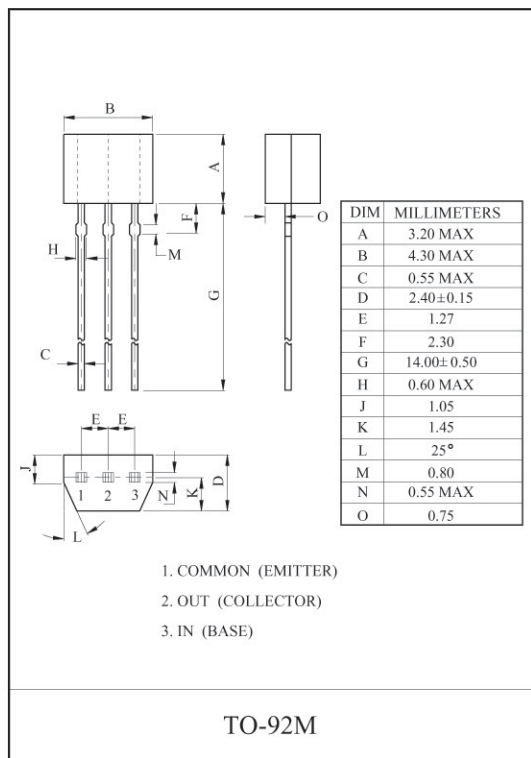
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(k Ω)	R2(k Ω)
KRC116M	1	10
KRC117M	2.2	2.2
KRC118M	2.2	10
KRC119M	4.7	10
KRC120M	10	4.7
KRC121M	47	10
KRC122M	100	100



MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC116M~122M	V_o	50	V
Input Voltage	KRC116M	V_i	10 -5	V
	KRC117M		12 -10	
	KRC118M		12 -5	
	KRC119M		20 -7	
	KRC120M		30 -10	
	KRC121M		40 -15	
	KRC122M		40 -10	
Output Current	KRC116M~122M	I_o	100	mA
Power Dissipation		P_D	400	mW
Junction Temperature		T	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

KRC116M~KRC122M

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC116M~122M	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	KRC116M	G_I	$V_O=5V, I_O=5mA$	33	-	-	
	KRC117M		$V_O=5V, I_O=20mA$	20	-	-	
	KRC118M		$V_O=5V, I_O=10mA$	33	-	-	
	KRC119M		$V_O=5V, I_O=10mA$	30	-	-	
	KRC120M		$V_O=5V, I_O=10mA$	24	-	-	
	KRC121M		$V_O=5V, I_O=5mA$	33	-	-	
	KRC122M		$V_O=5V, I_O=5mA$	62	-	-	
Output Voltage	KRC116M	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	-	0.3	V
	KRC117M		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC118M		$I_O=10mA, I_I=0.5mA$	-	-	0.3	
	KRC119M		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC120M		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC121M		$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	
	KRC122M		$I_O=5mA, I_I=0.25mA$	-	0.1	0.3	
Input Voltage (ON)	KRC116M	$V_{I(ON)}$	$V_O=0.3V, I_O=20mA$	-	0.98	3	V
	KRC117M		$V_O=0.3V, I_O=20mA$	-	1.83	3	
	KRC118M		$V_O=0.3V, I_O=20mA$	-	1.22	3	
	KRC119M		$V_O=0.3V, I_O=20mA$	-	1.76	2.5	
	KRC120M		$V_O=0.3V, I_O=2mA$	-	2	3	
	KRC121M		$V_O=0.3V, I_O=2mA$	-	3.9	5	
	KRC122M		$V_O=0.3V, I_O=1mA$	-	1.64	3	
Input Voltage (OFF)	KRC116M	$V_{I(OFF)}$	$V_{CC}=5V, I_O=100\mu A$	0.3	0.63	-	V
	KRC117M			0.5	1.15	-	
	KRC118M			0.3	0.67	-	
	KRC119M			0.3	0.82	-	
	KRC120M			0.8	1.68	-	
	KRC121M			1	3.09	-	
	KRC122M			0.5	1.17	-	
Transition Frequency	KRC116M~122M	f_T^*	$V_O=10V, I_O=5mA$	-	250	-	MHz
Input Current	KRC116M	I_I	$V_I=5V$	-	-	7.2	mA
	KRC117M			-	-	3.8	
	KRC118M			-	-	3.8	
	KRC119M			-	-	1.8	
	KRC120M			-	-	0.88	
	KRC121M			-	-	0.16	
	KRC122M			-	-	0.15	
Input Resistor	KRC116M	R1	-	0.7	1	1.3	k Ω
	KRC117M			1.54	2.2	2.86	
	KRC118M			1.54	2.2	2.86	
	KRC119M			3.29	4.7	6.11	
	KRC120M			7	10	13	
	KRC121M			32.9	47	61.1	
	KRC122M			70	100	130	
Resistor Ratio	KRC116M	R2/R1	-	8	10	12	
	KRC117M			0.8	1.0	1.2	
	KRC118M			3.6	4.5	5.5	
	KRC119M			1.7	2.1	2.6	
	KRC120M			0.37	0.47	0.57	
	KRC121M			0.17	0.21	0.26	
	KRC122M			0.8	1.0	1.2	

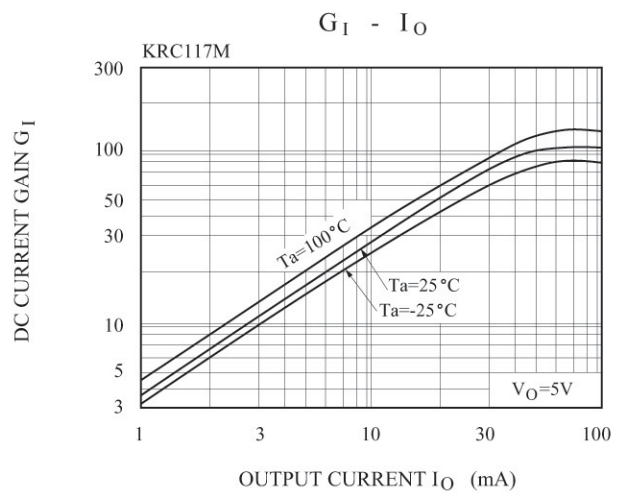
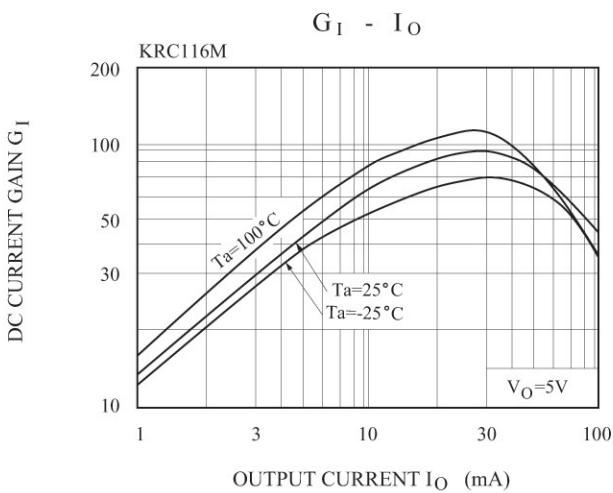
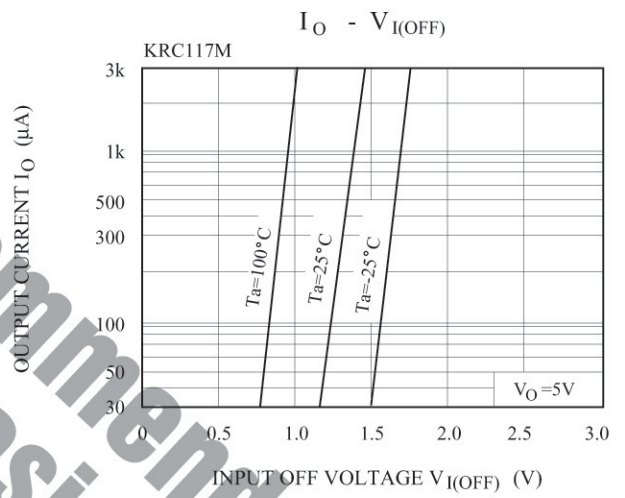
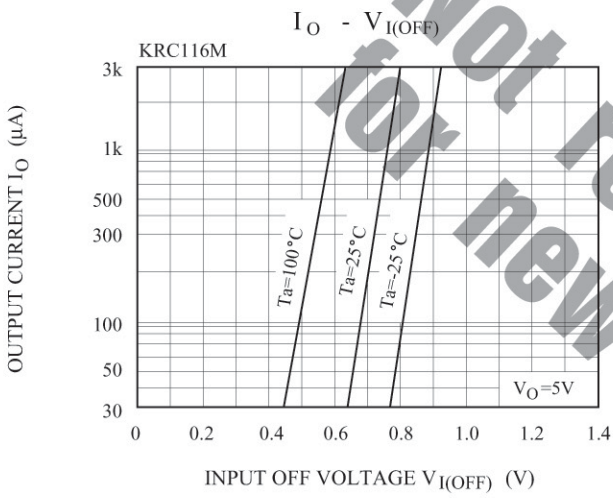
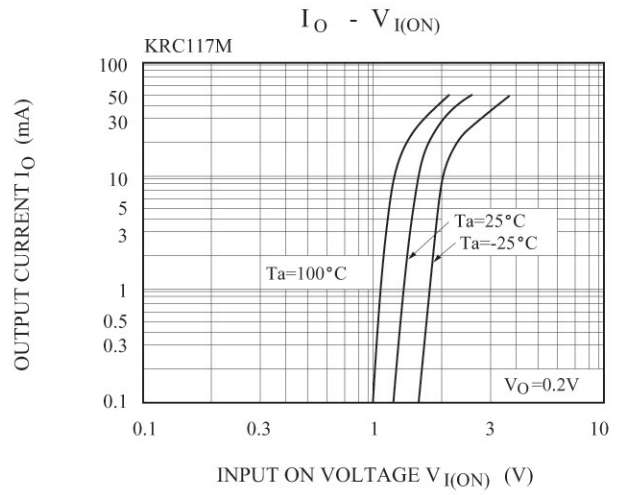
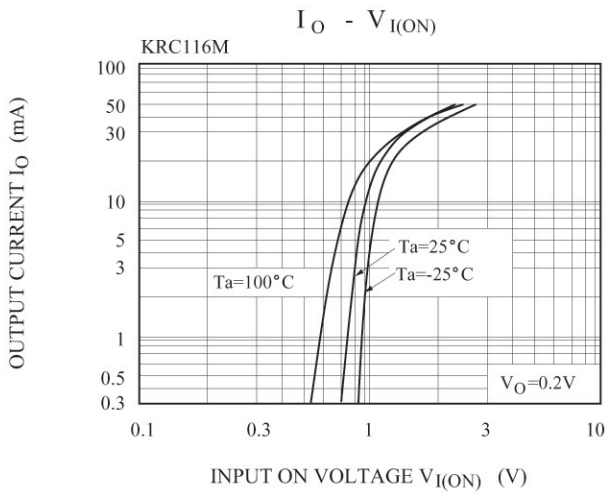
Note : * Characteristic of Transistor Only.

KRC116M~KRC122M

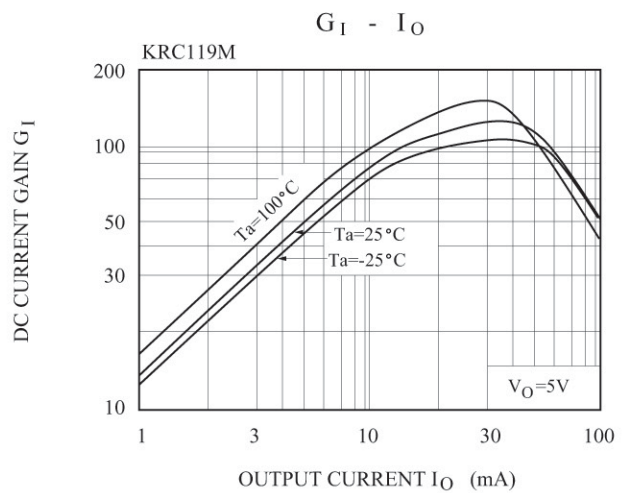
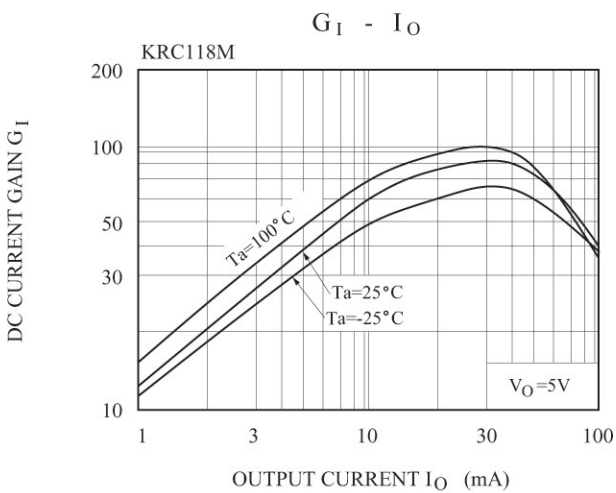
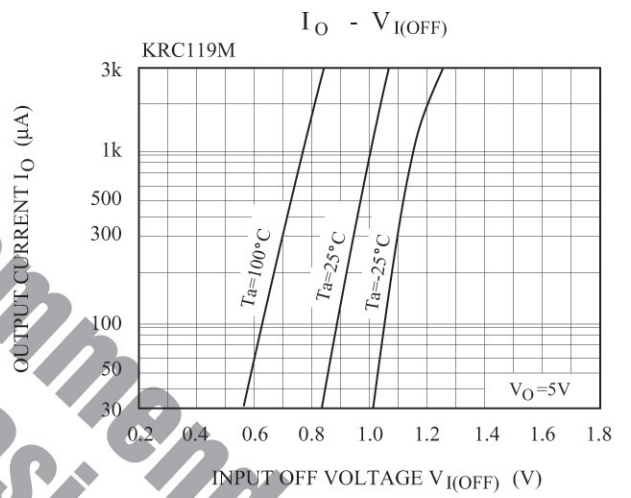
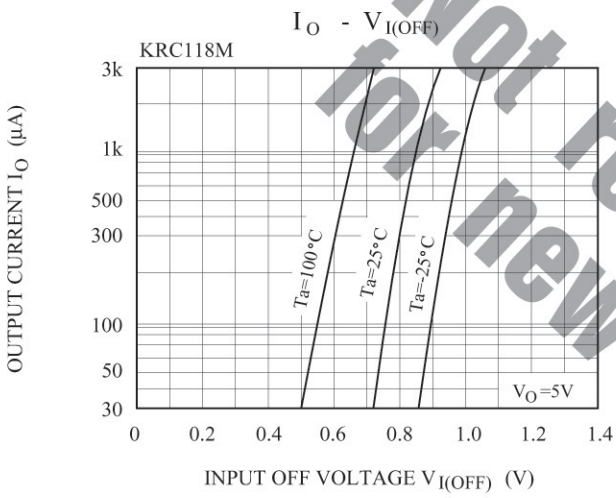
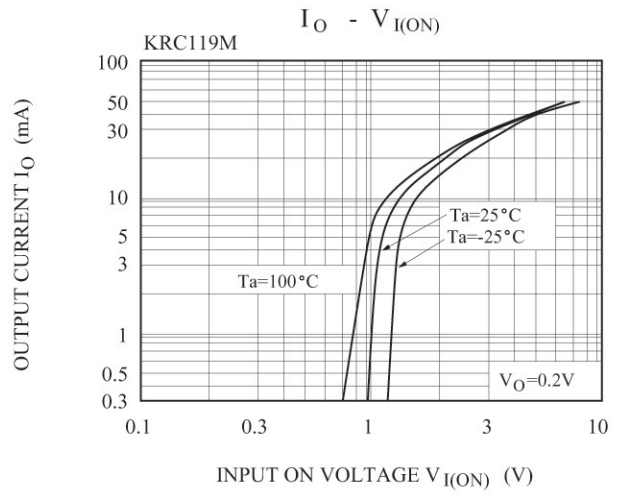
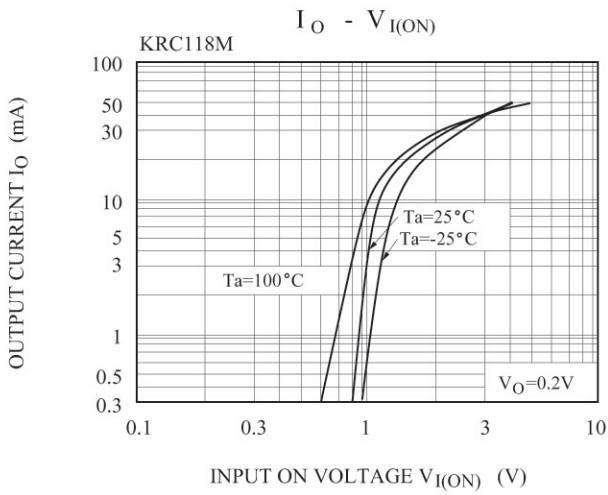
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT		
Switching Time	Rise Time	KRC116M	V _O =5V V _{IN} =5V R _L =1kΩ	-	0.01	-	μS		
		KRC117M		-	0.03	-			
		KRC118M		t _r	-	0.02		-	
		KRC119M			-	0.05		-	
		KRC120M			-	0.12		-	
		KRC121M			-	0.30		-	
		KRC122M			-	0.35		-	
	Storage Time	KRC116M			t _{stg}	-		3	-
		KRC117M				-		2	-
		KRC118M		-		3		-	
		KRC119M		-		3		-	
		KRC120M		-		2		-	
		KRC121M		-		2		-	
		KRC122M		-		2		-	
	Fall Time	KRC116M		t _f	-	0.1		-	
		KRC117M			-	0.19		-	
		KRC118M			-	0.1		-	
		KRC119M			-	0.36		-	
		KRC120M			-	0.35		-	
		KRC121M			-	0.5		-	
		KRC122M			-	0.7		-	

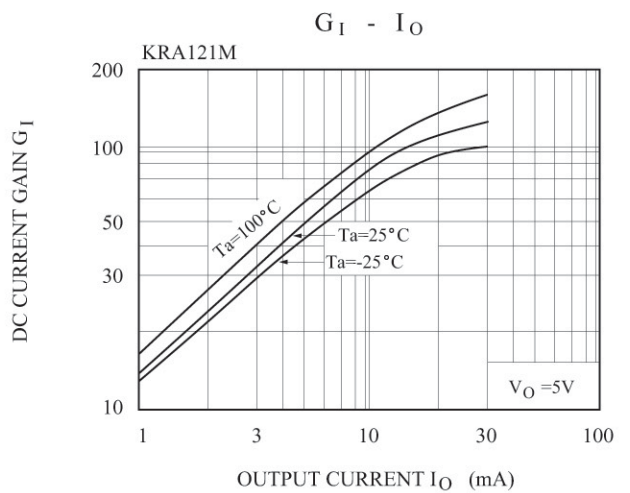
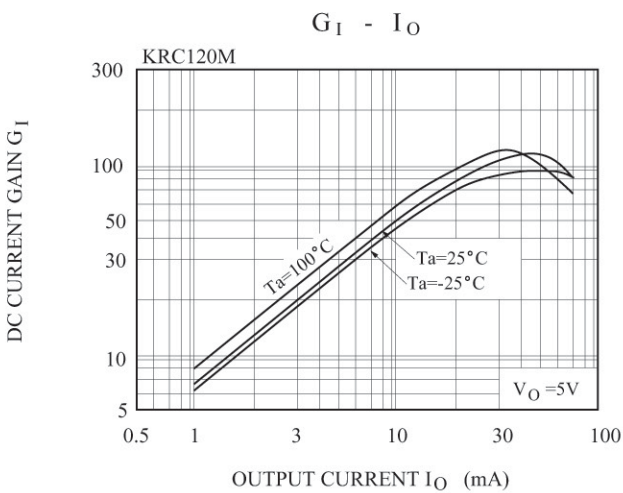
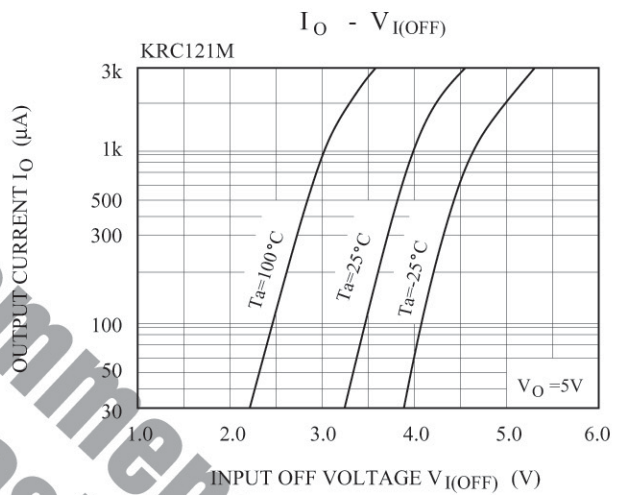
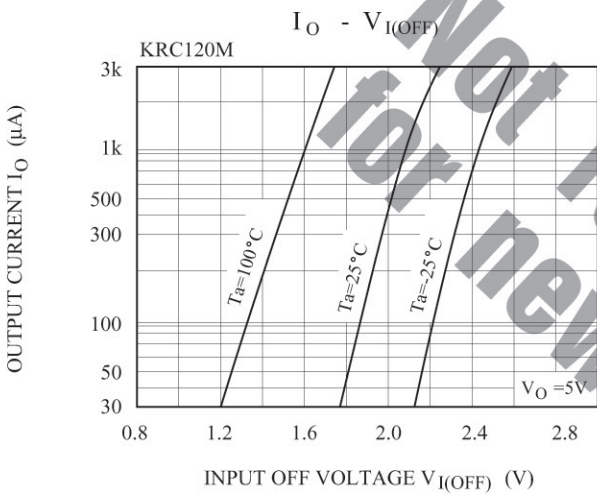
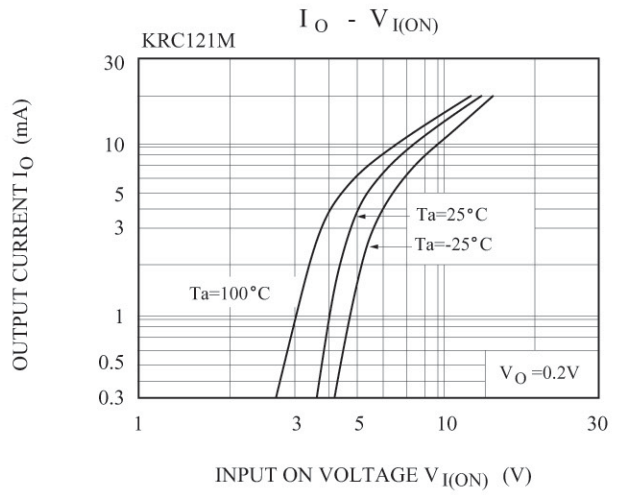
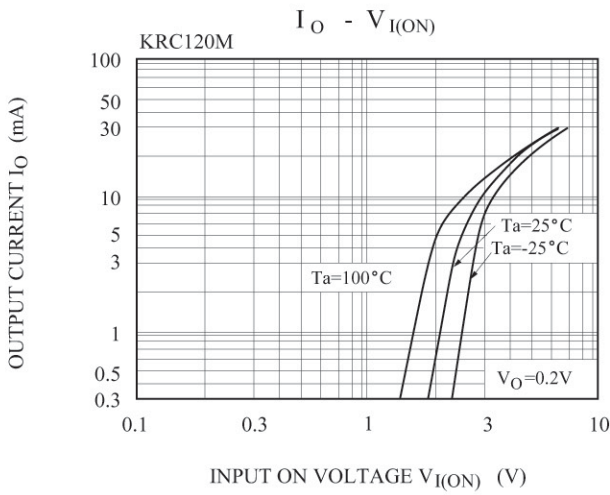
KRC116M~KRC122M



KRC116M~KRC122M



KRC116M~KRC122M



KRC116M~KRC122M

