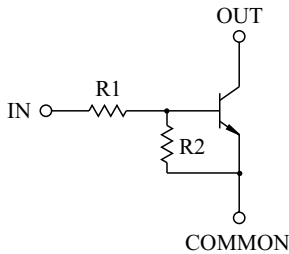


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION

FEATURES

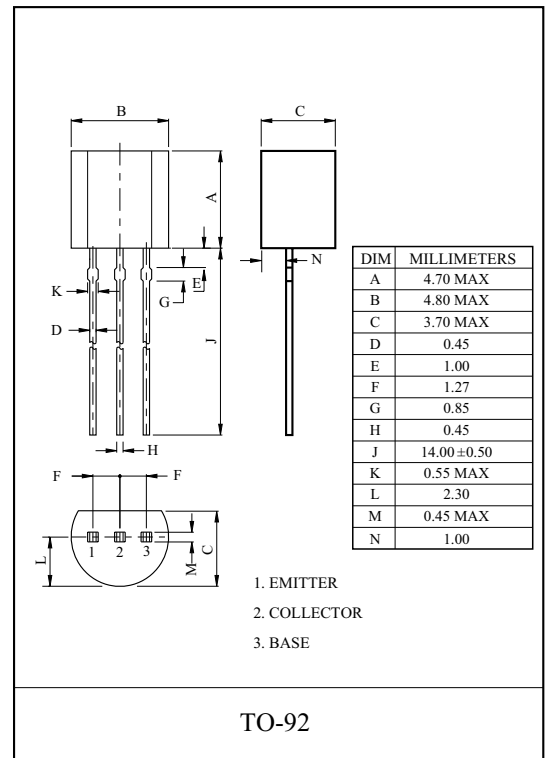
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(k Ω)	R2(k Ω)
KRC116	1	10
KRC117	2.2	2.2
KRC118	2.2	10
KRC119	4.7	10
KRC120	10	4.7
KRC121	47	10
KRC122	100	100



MAXIMUM RATING (Ta=25 $^{\circ}$ C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC116 122	V_O	50	V
Input Voltage	KRC116	V_i	10, -5	V
	KRC117		12, -10	
	KRC118		12, -5	
	KRC119		20, -7	
	KRC120		30, -10	
	KRC121		40, -15	
	KRC122		40, -10	
Output Current	KRC116 122	I_O	100	mA
Power Dissipation		P_D	625	mW
Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	

KRC116~KRC122

ELECTRICAL CHARACTERISTICS (Ta=25)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC116 122	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	KRC116	G_I	$V_O=5V, I_O=5mA$	33	-	-	
	KRC117		$V_O=5V, I_O=20mA$	20	-	-	
	KRC118		$V_O=5V, I_O=10mA$	33	-	-	
	KRC119		$V_O=5V, I_O=10mA$	30	-	-	
	KRC120		$V_O=5V, I_O=10mA$	24	-	-	
	KRC121		$V_O=5V, I_O=5mA$	33	-	-	
	KRC122		$V_O=5V, I_O=5mA$	62	-	-	
	Output Voltage		KRC116	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	
KRC117		$I_O=10mA, I_I=0.5mA$	-		0.1	0.3	
KRC118		$I_O=10mA, I_I=0.5mA$	-		-	0.3	
KRC119		$I_O=10mA, I_I=0.5mA$	-		0.1	0.3	
KRC120		$I_O=10mA, I_I=0.5mA$	-		0.1	0.3	
KRC121		$I_O=10mA, I_I=0.5mA$	-		0.1	0.3	
KRC122		$I_O=5mA, I_I=0.25mA$	-		0.1	0.3	
Input Voltage (ON)		KRC116	$V_{I(ON)}$		$V_O=0.3V, I_O=20mA$	-	0.98
	KRC117	$V_O=0.3V, I_O=20mA$		-	1.83	3	
	KRC118	$V_O=0.3V, I_O=20mA$		-	1.22	3	
	KRC119	$V_O=0.3V, I_O=20mA$		-	1.76	2.5	
	KRC120	$V_O=0.3V, I_O=2mA$		-	2	3	
	KRC121	$V_O=0.3V, I_O=2mA$		-	3.9	5	
	KRC122	$V_O=0.3V, I_O=1mA$		-	1.64	3	
	Input Voltage (OFF)	KRC116		$V_{I(OFF)}$	$V_{CC}=5V, I_O=100\mu A$	0.3	0.63
KRC117		0.5	1.15			-	
KRC118		0.3	0.67			-	
KRC119		0.3	0.82			-	
KRC120		0.8	1.68			-	
KRC121		1	3.09			-	
KRC122		0.5	1.17			-	
Transition Frequency		KRC116 122	f_T^*			$V_O=10V, I_O=5mA$	-
Input Current	KRC116	I_I	$V_I=5V$	-	-	7.2	mA
	KRC117			-	-	3.8	
	KRC118			-	-	3.8	
	KRC119			-	-	1.8	
	KRC120			-	-	0.88	
	KRC121			-	-	0.16	
	KRC122			-	-	0.15	
	Input Resistor			KRC116	R1	-	
KRC117		1.54	2.2	2.86			
KRC118		1.54	2.2	2.86			
KRC119		3.29	4.7	6.11			
KRC120		7	10	13			
KRC121		32.9	47	61.1			
KRC122		70	100	130			

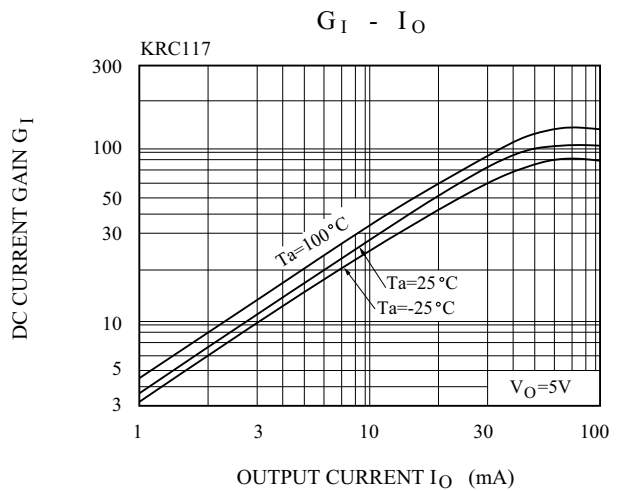
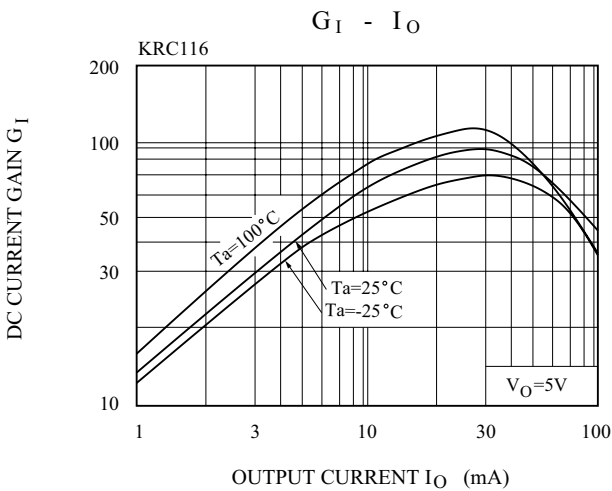
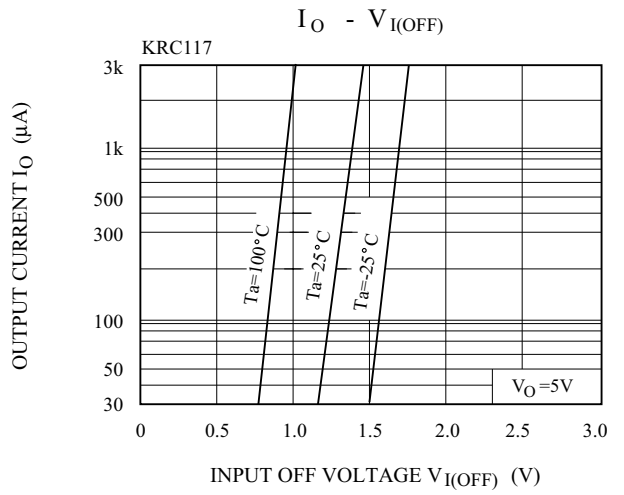
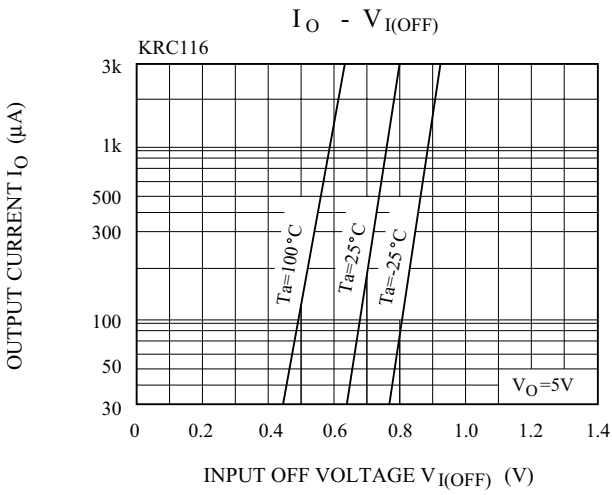
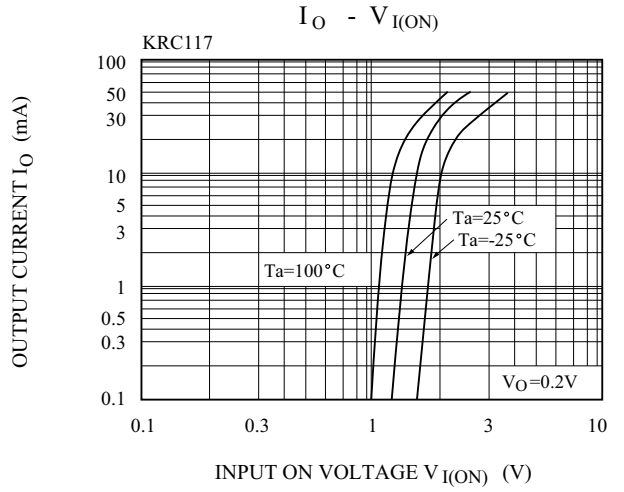
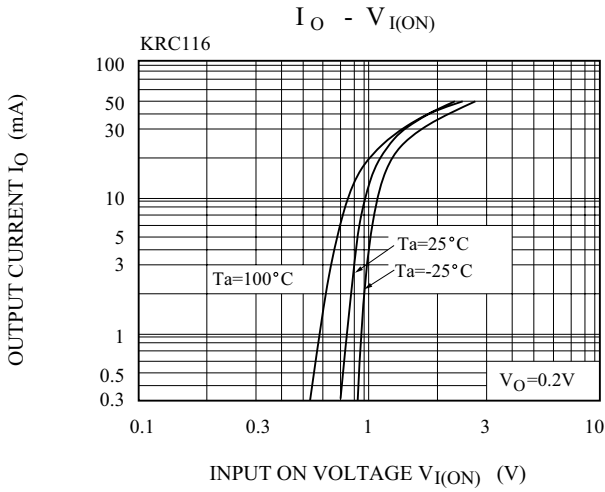
Note : * Characteristic of Transistor Only.

KRC116~KRC122

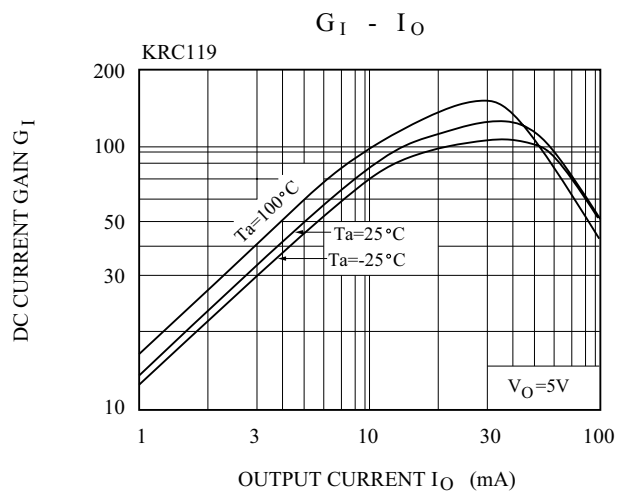
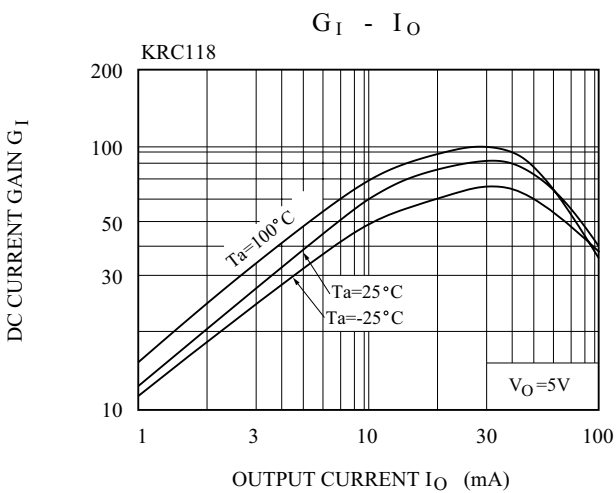
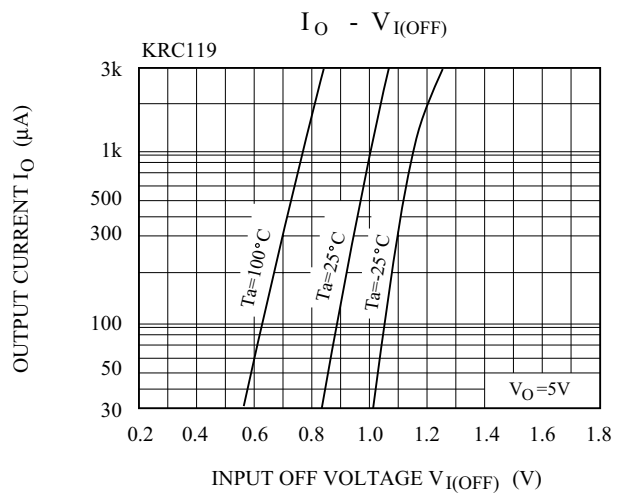
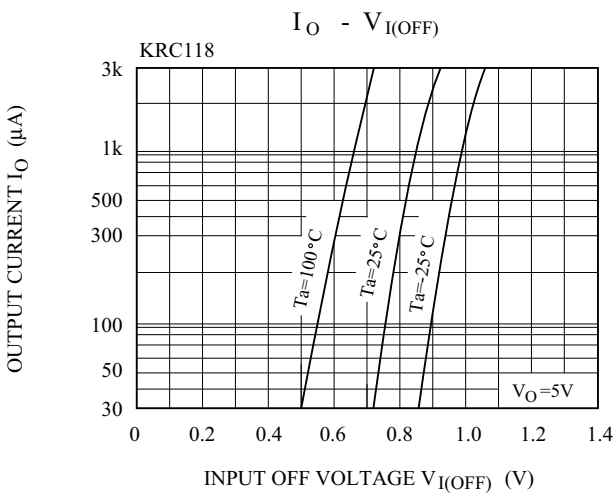
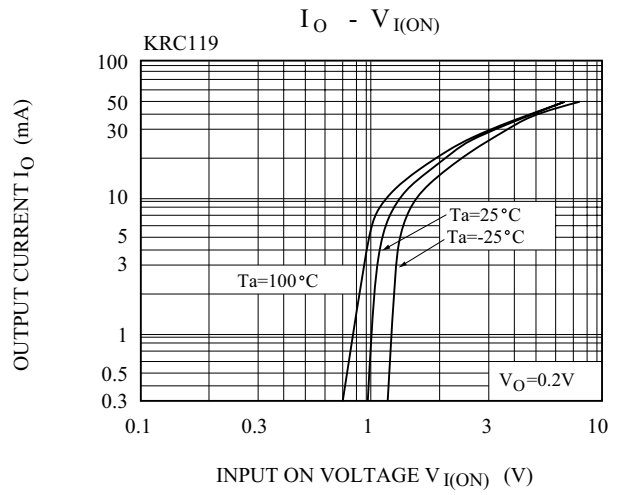
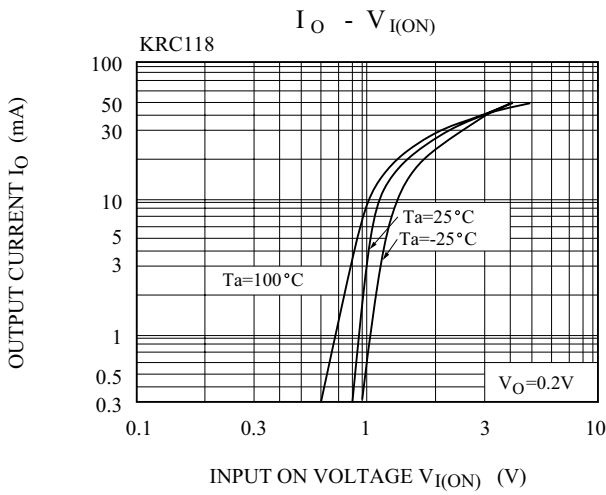
ELECTRICAL CHARACTERISTICS (Ta=25)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT		
Switching Time	Rise Time	KRC116	$V_O=5V$ $V_{IN}=5V$ $R_L=1k$	-	0.01	-	μs		
		KRC117		-	0.03	-			
		KRC118		t_r	-	0.02		-	
		KRC119			-	0.05		-	
		KRC120			-	0.12		-	
		KRC121			-	0.30		-	
		KRC122			-	0.35		-	
	Storage Time	KRC116			t_{stg}	-		3	-
		KRC117				-		2	-
		KRC118		-		3		-	
		KRC119		-		3		-	
		KRC120		-		2		-	
		KRC121		-		2		-	
		KRC122		-		2		-	
	Fall Time	KRC116		t_f	-	0.1		-	
		KRC117			-	0.19		-	
		KRC118			-	0.1		-	
		KRC119			-	0.36		-	
		KRC120			-	0.35		-	
		KRC121			-	0.5		-	
		KRC122			-	0.7		-	

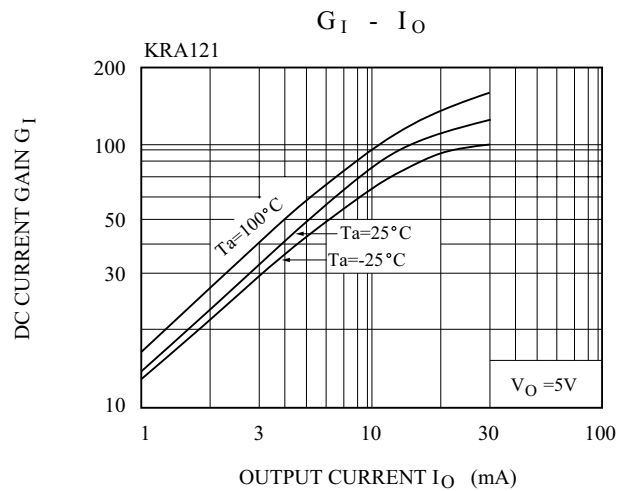
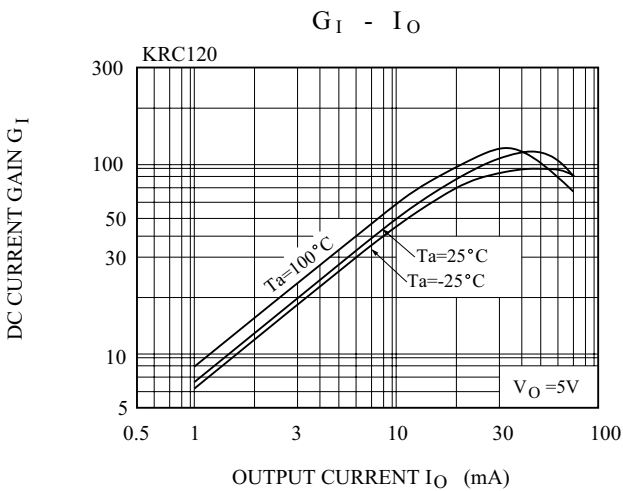
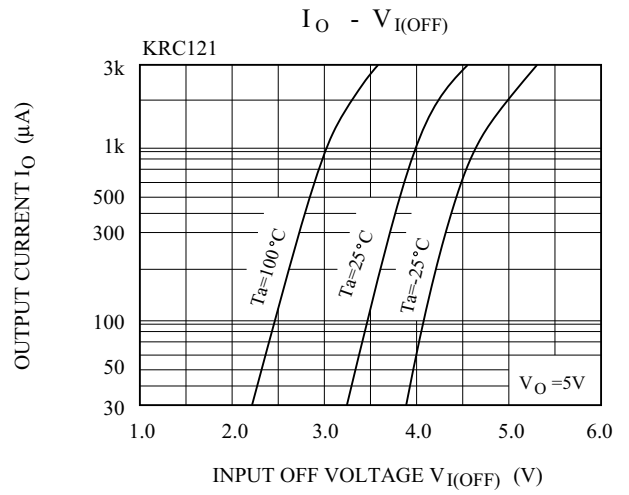
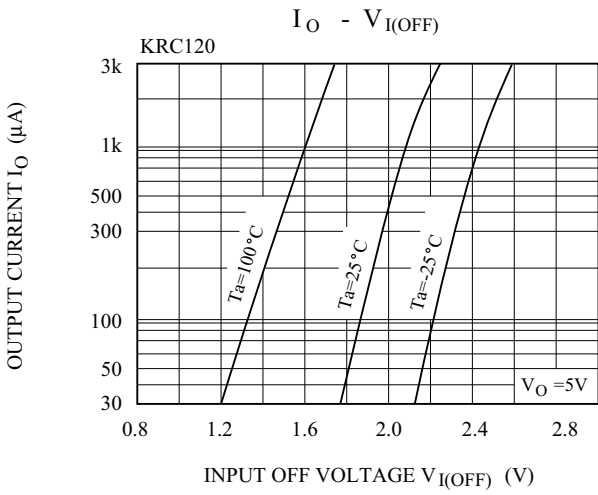
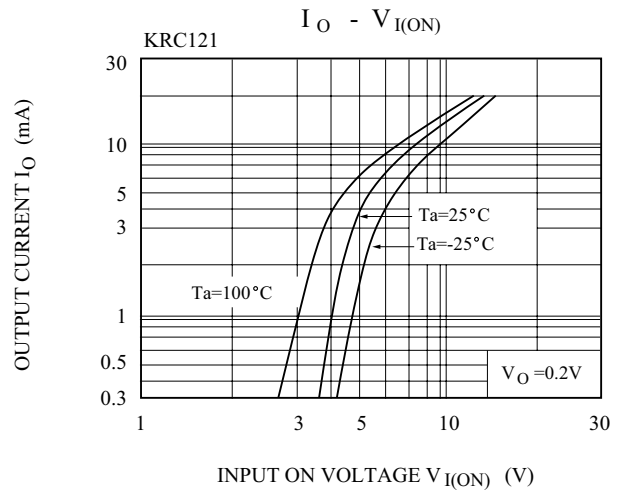
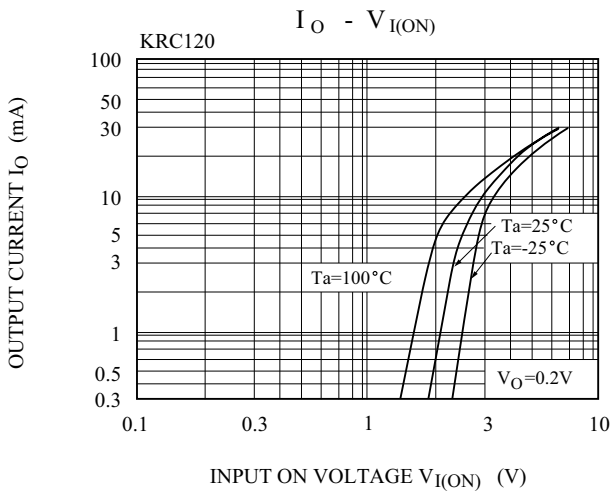
KRC116~KRC122



KRC116~KRC122



KRC116~KRC122



KRC116~KRC122

