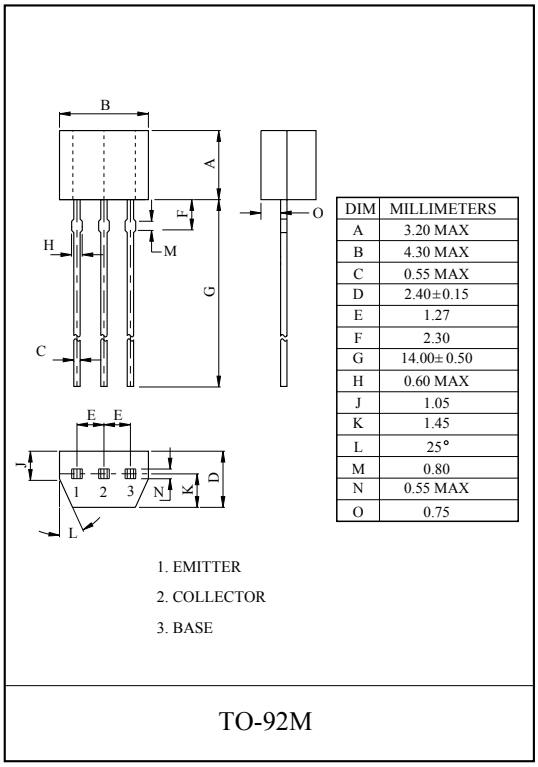
KRC107M~KRC109M

EPITAXIAL PLANAR NPN TRANSISTOR

SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

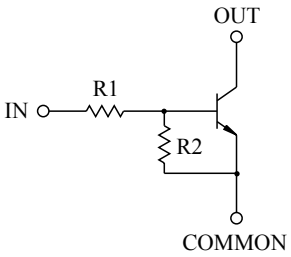
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process



DIM	MILLIMETERS
A	3.20 MAX
B	4.30 MAX
C	0.55 MAX
D	2.40±0.15
E	1.27
F	2.30
G	14.00± 0.50
H	0.60 MAX
J	1.05
K	1.45
L	25°
M	0.80
N	0.55 MAX
O	0.75

TO-92M

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

TYPE NO.	R1(kΩ)	R2(kΩ)
KRC107M	10	47
KRC108M	22	47
KRC109M	47	22

MAXIMUM RATING (Ta=25℃)

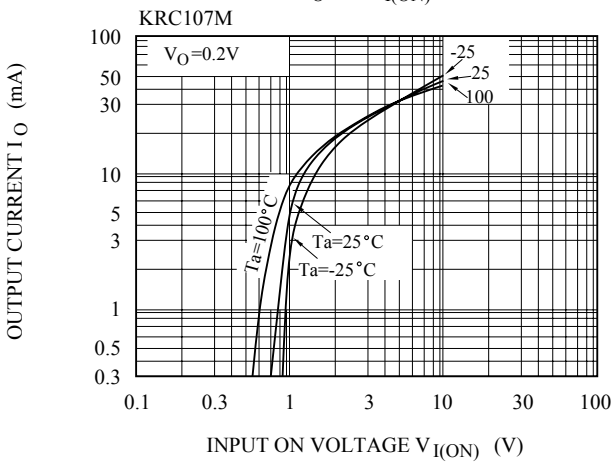
CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC107M~109M	V_O	50	V
Input Voltage	KRC107M	V_I	30, -6	V
	KRC108M		40, -7	
	KRC109M		40, -15	
Output Current	KRC107M~109M	I_O	100	mA
Power Dissipation		P_D	400	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

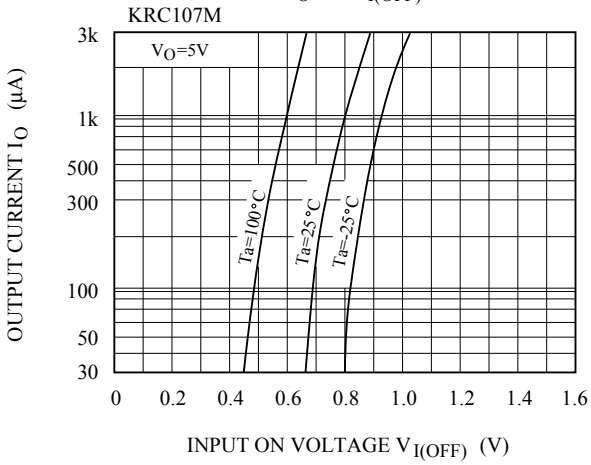
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current		KRC107M~109M	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain		KRC107M	G_I	V_O=5V, I_O=10mA	80	150	-	
		KRC108M			80	150	-	
		KRC109M			70	140	-	
Output Voltage		KRC107M~109M	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)		KRC107M	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.2	1.8	V
		KRC108M			-	1.8	2.6	
		KRC109M			-	3.0	5.8	
Input Votlage (OFF)		KRC107M	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	0.5	0.75	-	V
		KRC108M			0.6	0.88	-	
		KRC109M			1.5	1.82	-	
Transition Frequency		KRC107M~109M	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current		KRC107M	I_I	V_I=5V	-	-	0.88	mA
		KRC108M			-	-	0.36	
		KRC109M			-	-	0.16	
Switching Time	Rise Time	KRC107M	t_r	V_O=5V, V_{IN}=5V R_L=1kΩ	-	0.05	-	μS
		KRC108M			-	0.12	-	
		KRC109M			-	0.26	-	
	Storage Time	KRC107M	t_{stg}		-	2.0	-	
		KRC108M			-	2.4	-	
		KRC109M			-	1.5	-	
	Fall Time	KRC107M	t_f		-	0.36	-	
		KRC108M			-	0.4	-	
		KRC109M			-	0.41	-	

Note : * Characteristic of Transistor Only.

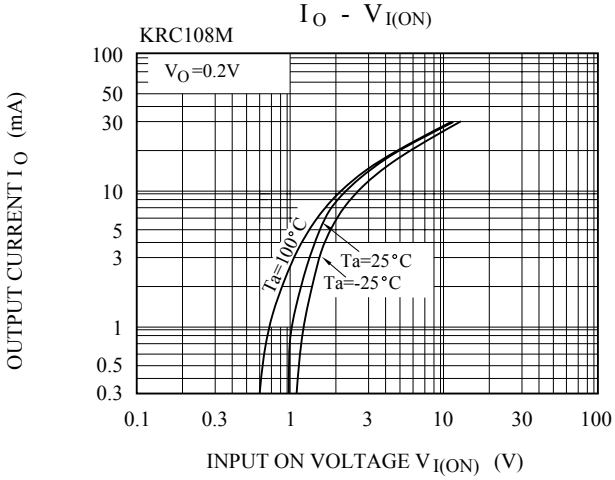
I_O - $V_{I(ON)}$



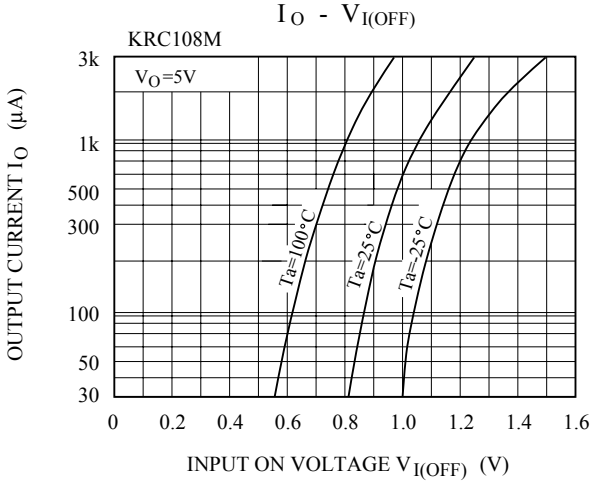
I_O - $V_{I(OFF)}$



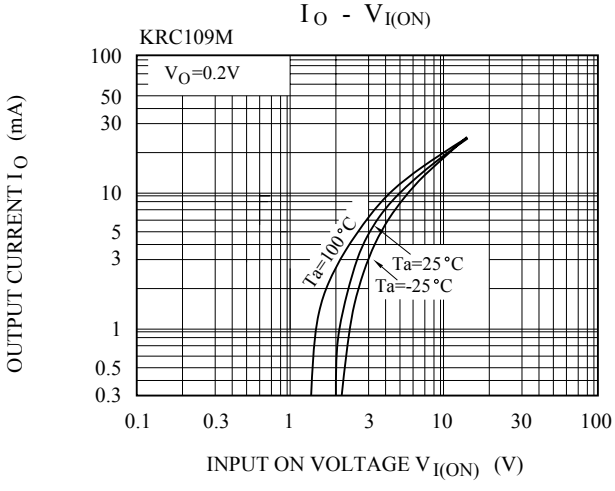
I_O - $V_{I(ON)}$



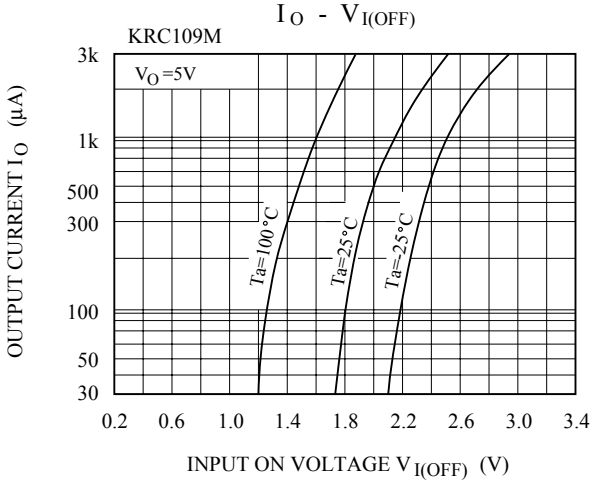
I_O - $V_{I(OFF)}$



I_O - $V_{I(ON)}$

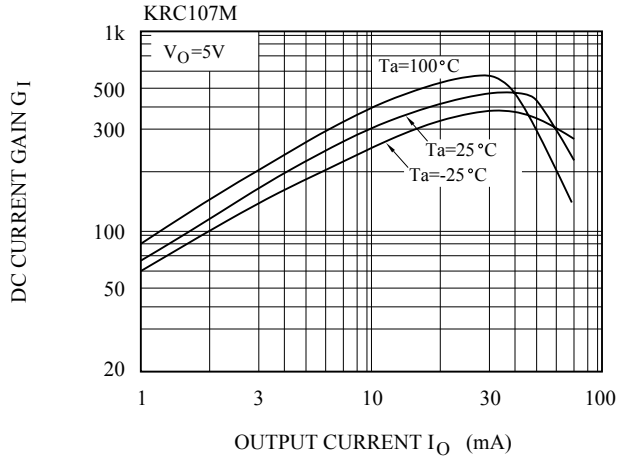


I_O - $V_{I(OFF)}$



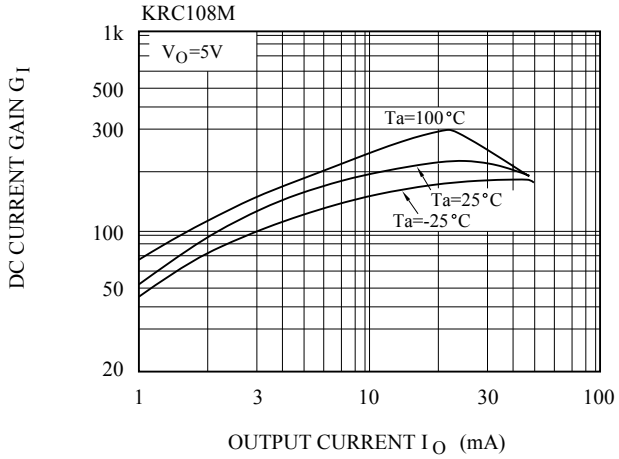
G_I - I_O

KRC107M



G_I - I_O

KRC108M



G_I - I_O

KRC109M