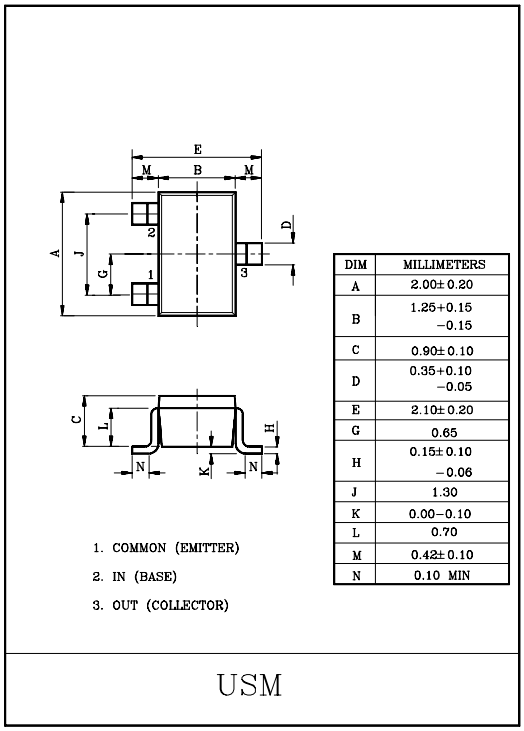
KRC407~ KRC409

EPITAXIAL PLANAR NPN TRANSISTOR

SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

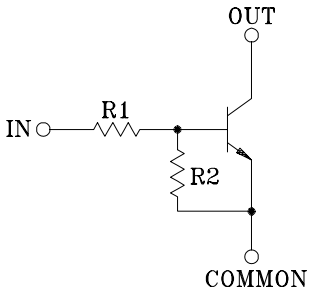
FEATURES
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Packing Density.



DIM	MILLIMETERS
A	2.00±0.20
B	1.25+0.15 −0.15
C	0.90±0.10
D	0.35+0.10 −0.05
E	2.10±0.20
G	0.65
H	0.15±0.10 −0.06
J	1.30
K	0.00−0.10
L	0.70
M	0.42±0.10
N	0.10 MIN

USM

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

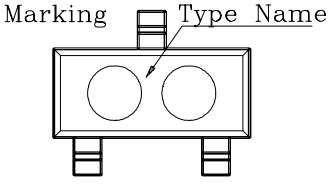
TYPE NO.	R1(kΩ)	R2(kΩ)
KRC407	10	47
KRC408	22	47
KRC409	47	22

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC407~409	V_O	50	V
Input Voltage	KRC407	V_I	30, -6	V
	KRC408		40, -7	
	KRC409		40,-15	
Output Current	KRC407~409	I_O	100	mA
Power Dissipation		P_D	100	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55~150	℃

MARK SPEC

TYPE	KRC407	KRC408	KRC409
MARK	NH	NI	NJ

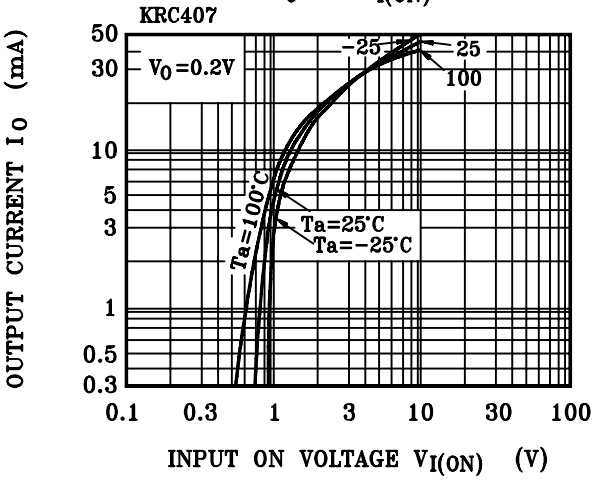


ELECTRICAL CHARACTERISTICS (Ta=25℃)

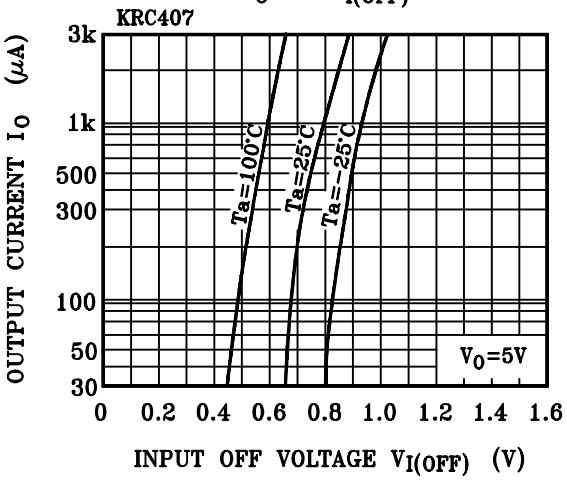
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current		KRC407~409	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain		KRC407	G_I	V_O=5V, I_O=10mA	80	150	-	
		KRC408			80	150	-	
		KRC409			70	140	-	
Output Voltage		KRC407~409	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
Input Voltage (ON)		KRC407	$V_{I(ON)}$	V_O=0.2V, I_O=5mA	-	1.2	1.8	V
		KRC408			-	1.8	2.6	
		KRC409			-	3.0	5.8	
Input Votlage (OFF)		KRC407	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	0.5	0.75	-	V
		KRC408			0.6	0.88	-	
		KRC409			1.5	1.82	-	
Transition Frequency		KRC407~409	f_T *	V_O=10V, I_O=5mA	-	200	-	MHz
Input Current		KRC407	I_I	V_I=5V	-	-	0.88	mA
		KRC408			-	-	0.36	
		KRC409			-	-	0.16	
Switching Time	Rise Time	KRC407	t_r	V_O=5V, V_{IN}=5V R_L=1kΩ	-	0.05	-	μS
		KRC408			-	0.12	-	
		KRC409			-	0.26	-	
	Storage Time	KRC407	t_{stg}		-	2.0	-	
		KRC408			-	2.4	-	
		KRC409			-	1.5	-	
	Fall Time	KRC407	t_f		-	0.36	-	
		KRC408			-	0.4	-	
		KRC409			-	0.41	-	

Note : *Characteristic of Transistor Only

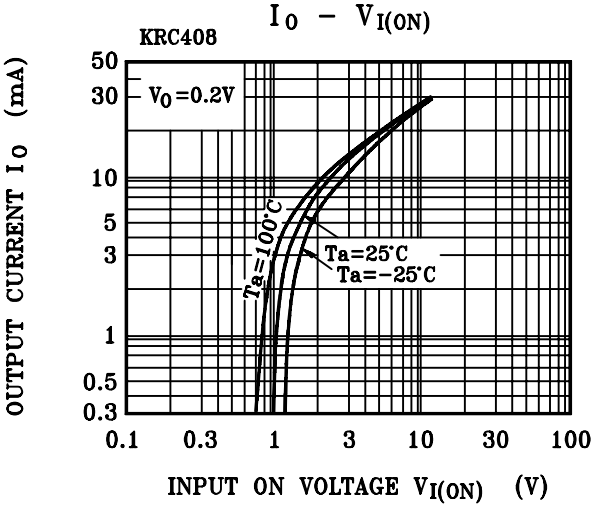
$I_O - V_{I(ON)}$



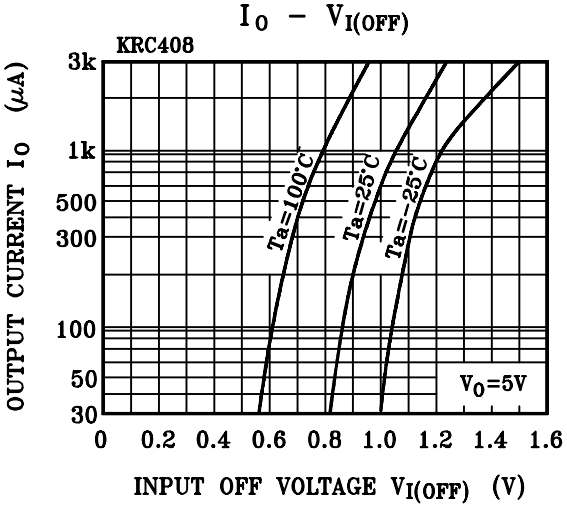
$I_O - V_{I(OFF)}$



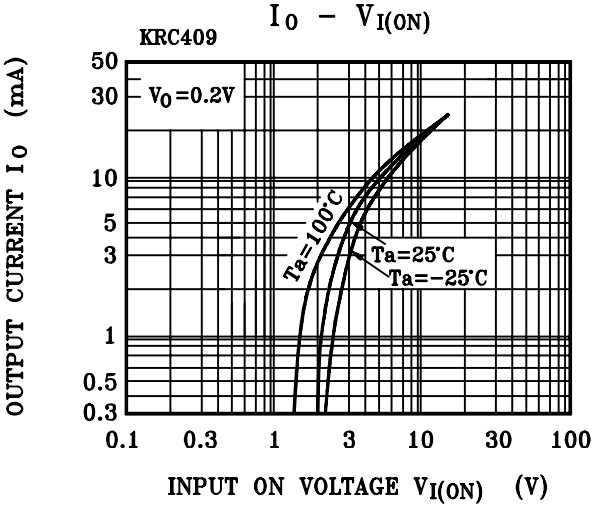
$I_O - V_{I(ON)}$



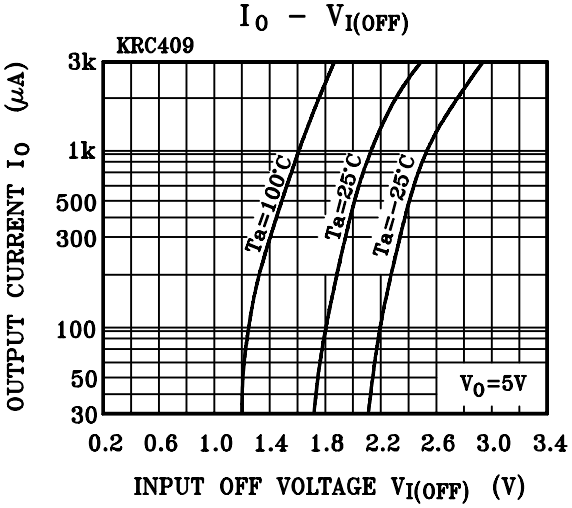
$I_O - V_{I(OFF)}$



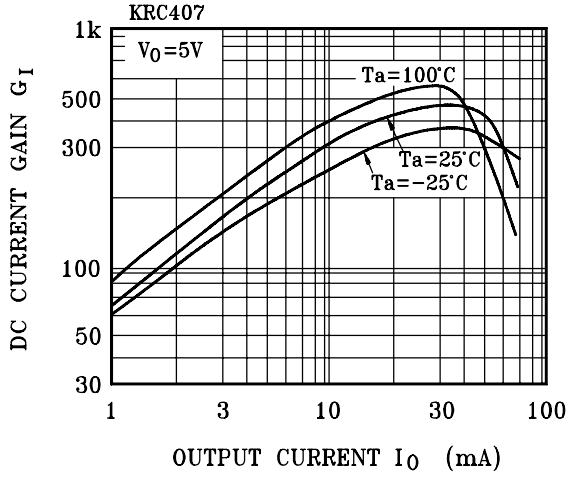
$I_O - V_{I(ON)}$



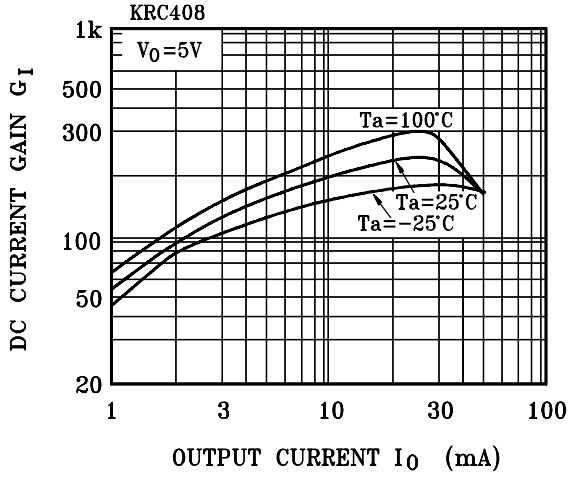
$I_O - V_{I(OFF)}$



$G_I - I_O$



$G_I - I_O$



$G_I - I_O$