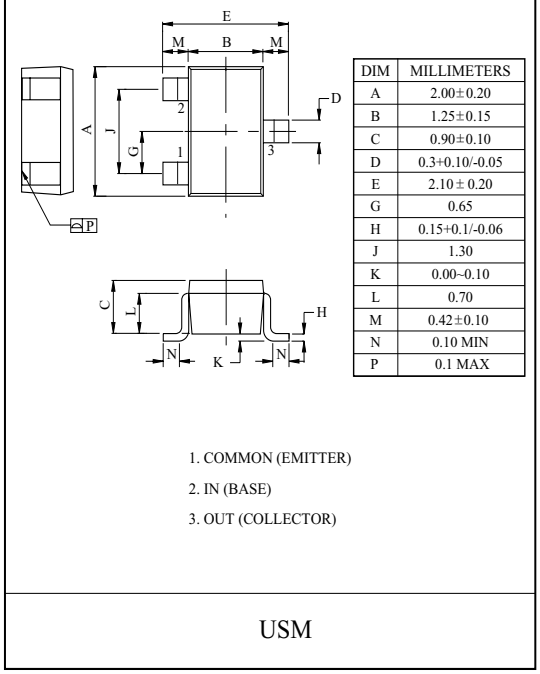
KRC407~KRC409

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.

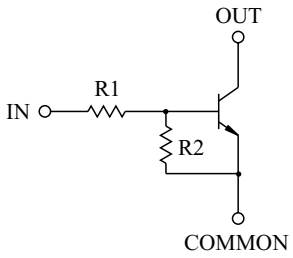


DIM	MILLIMETERS
A	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10±0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00~0.10
L	0.70
M	0.42±0.10
N	0.10 MIN
P	0.1 MAX

1. COMMON (EMITTER)
2. IN (BASE)
3. OUT (COLLECTOR)

USM

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

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

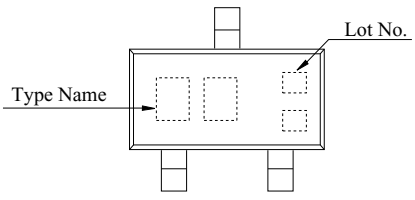
MAXIMUM RATING (Ta=25℃)

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

Marking

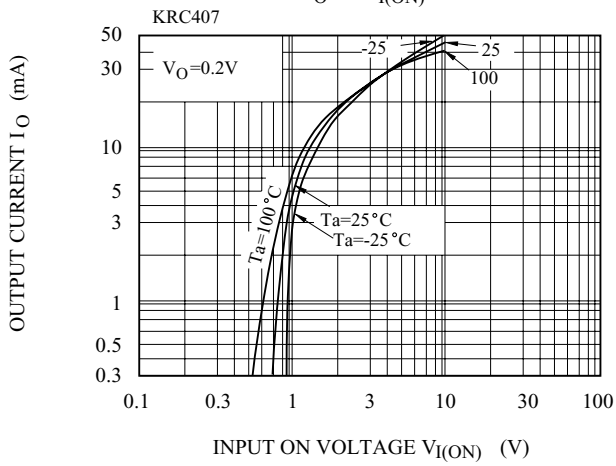


ELECTRICAL CHARACTERISTICS (Ta=25℃)

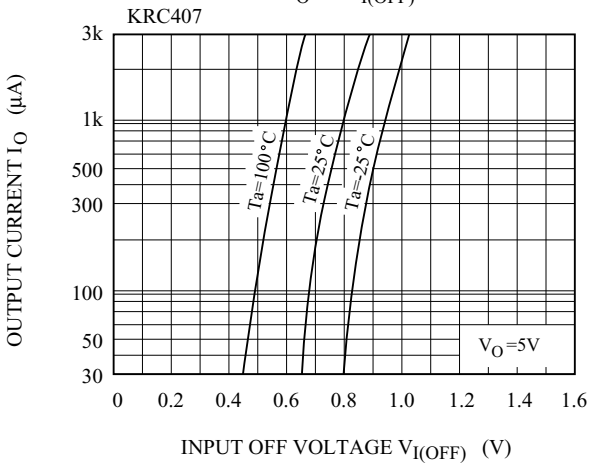
CHARACTERISTIC			SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current		KRC407 409	$I_{O(OFF)}$	V_O=50V, V_I=0	-	-	500	nA
DC Current Gain		KRC407	G_I	V_O=5V, I_O=10mA	80	150	-	
		KRC408			80	150	-	
		KRC409			70	140	-	
Output Voltage		KRC407 409	$V_{O(ON)}$	I_O=10mA, I_I=0.5mA	-	0.1	0.3	V
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	-	
Input Resistor		KRC407	R1	-	7	10	13	kΩ
		KRC408			15.4	22	28.6	
		KRC409			32.9	47	61.1	
Resistor Ratio		KRC407	R2/R1	-	3.7	4.7	5.7	
		KRC408			1.7	2.1	2.6	
		KRC409			0.37	0.47	0.57	

Note : * Characteristic of Transistor Only.

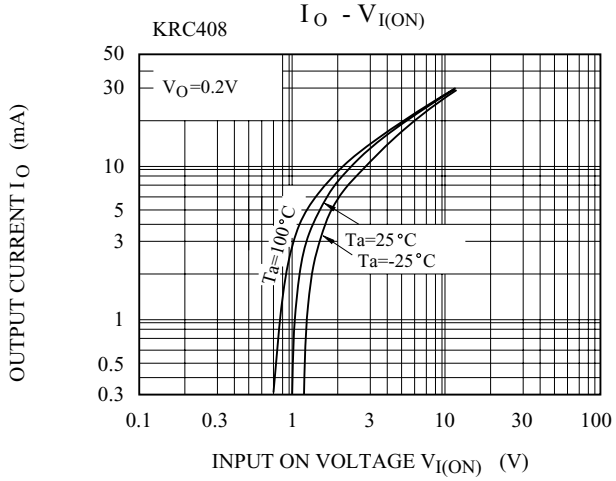
I_O - $V_{I(ON)}$



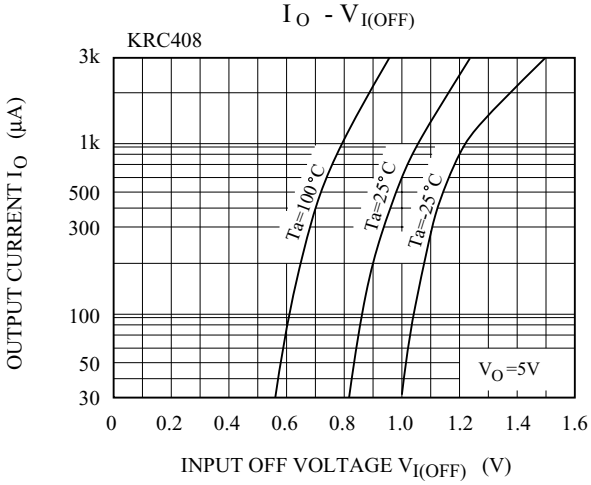
I_O - $V_{I(OFF)}$



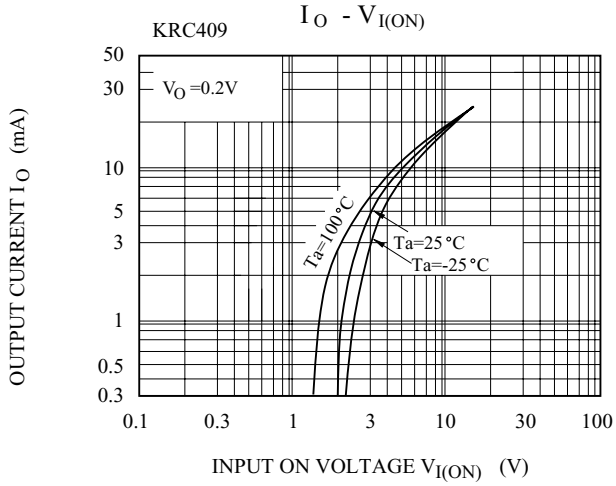
I_O - $V_{I(ON)}$



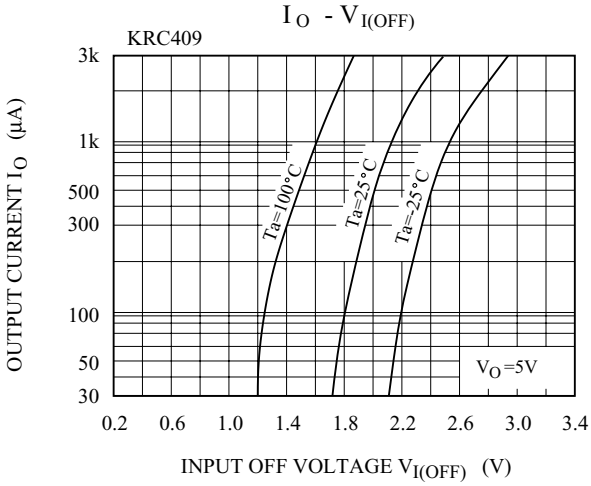
I_O - $V_{I(OFF)}$



I_O - $V_{I(ON)}$

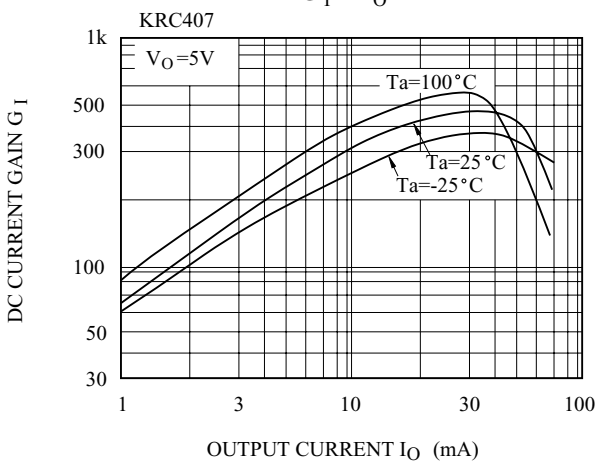


I_O - $V_{I(OFF)}$



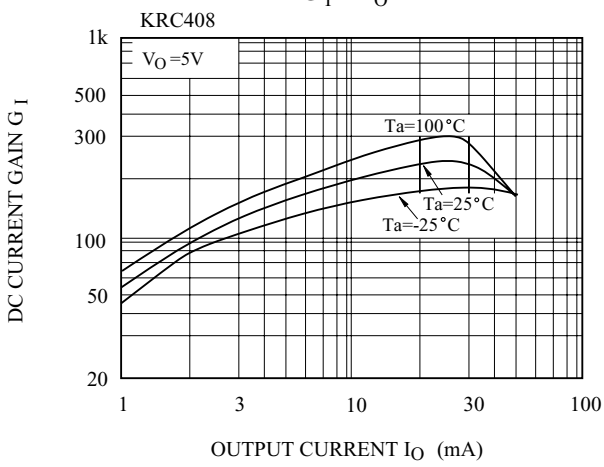
G_I - I_O

KRC407



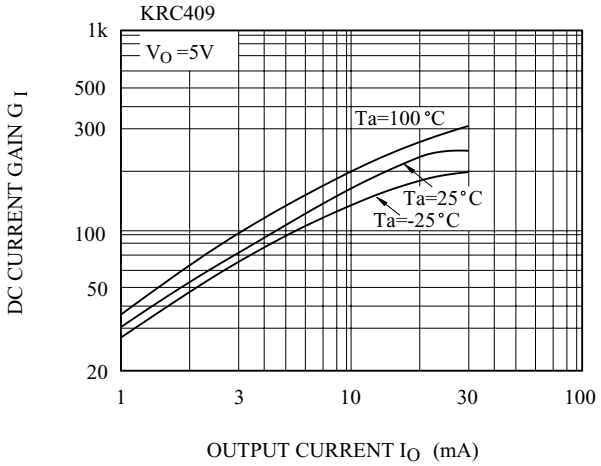
G_I - I_O

KRC408



G_I - I_O

KRC409



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