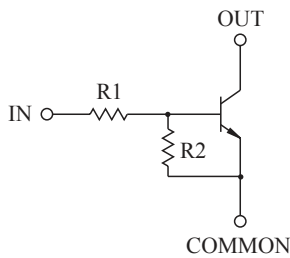


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

#### FEATURES

- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- High Packing Density.
- Suffix **U** : Qualified to AEC-Q101.  
ex) KRC407-RTK/H**U**
- Suffix **A** : USM(1) Package.  
ex) KRC407-RTK/P**A**

#### EQUIVALENT CIRCUIT



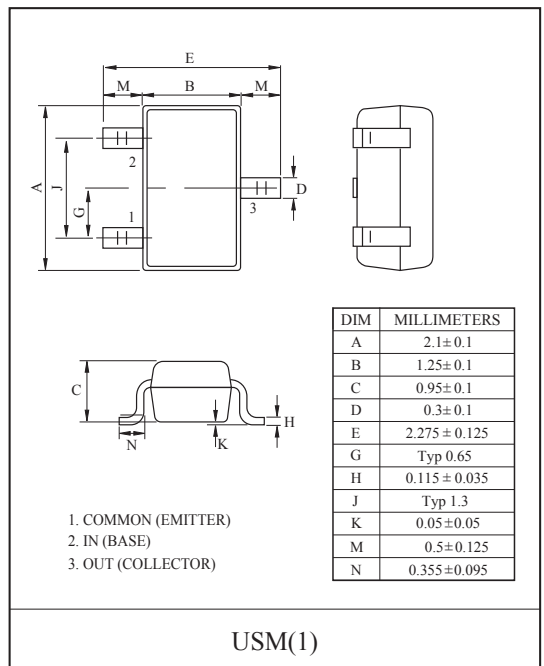
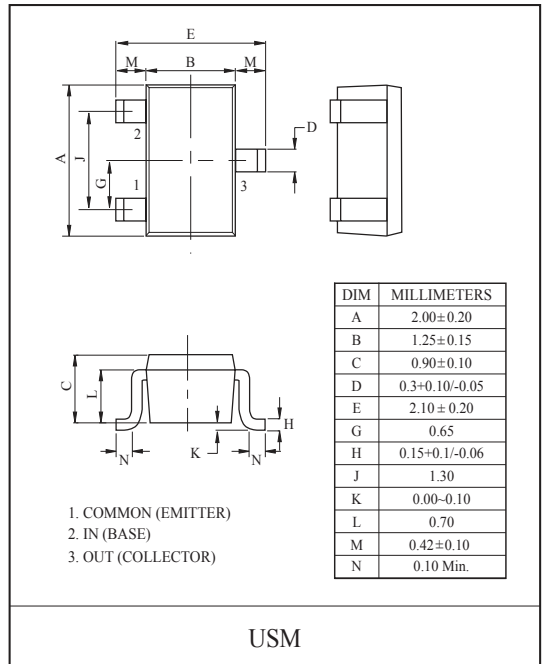
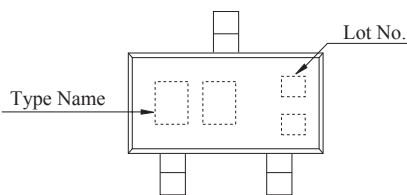
#### BIAS RESISTOR VALUES

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

#### MARK SPEC

TYPE	KRC407	KRC408	KRC409
MARK	NH	NI	NJ

#### Marking



#### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC407~409	V <sub>O</sub>	50	V
Input Voltage	KRC407	V <sub>I</sub>	30, -6	V
	KRC408		40, -7	
	KRC409		40, -15	
Output Current	KRC407~409	I <sub>O</sub>	100	mA
Power Dissipation		P <sub>D</sub>	100	mW
Junction Temperature		T <sub>j</sub>	-55~150	°C
Storage Temperature Range		T <sub>stg</sub>	-55~150	°C

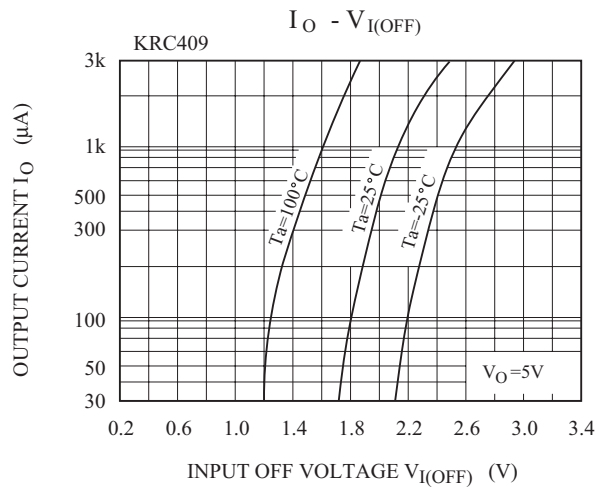
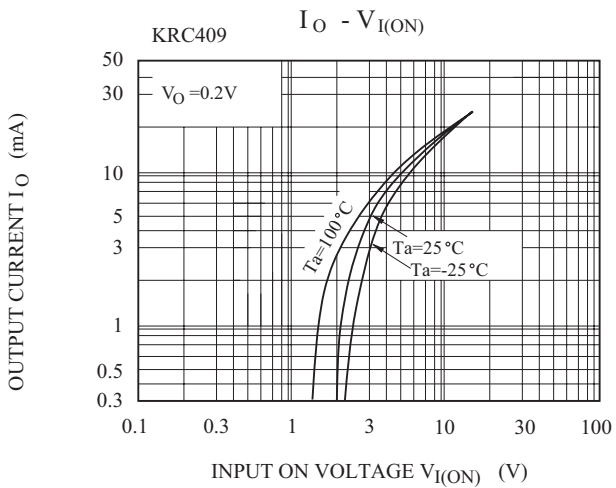
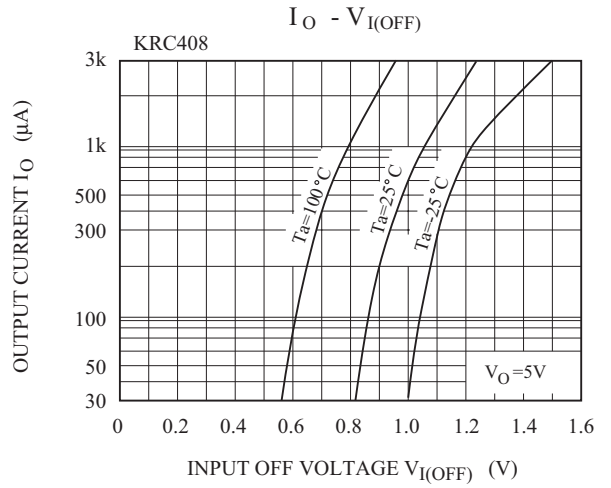
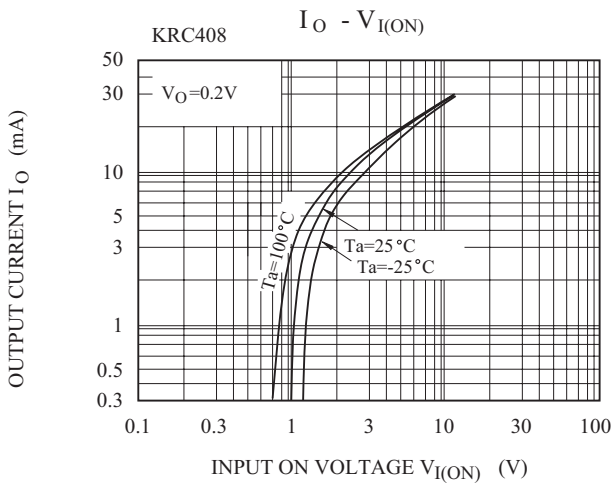
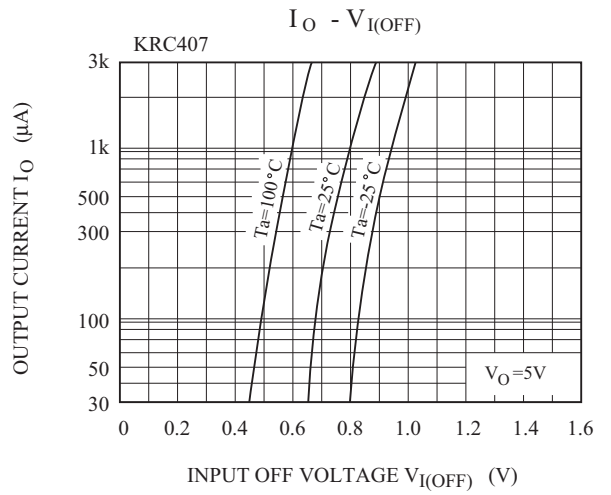
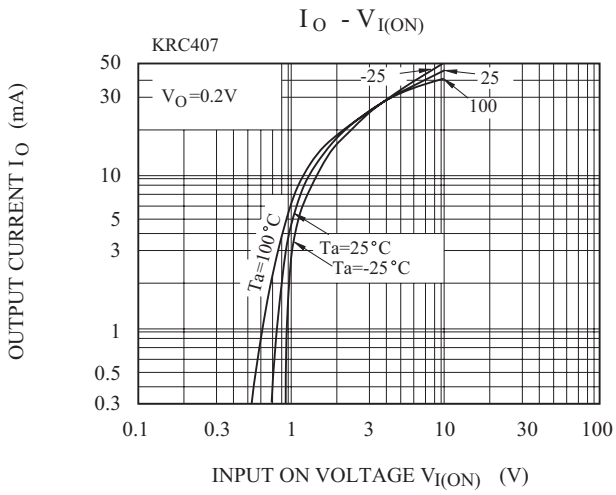
# KRC407~KRC409

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

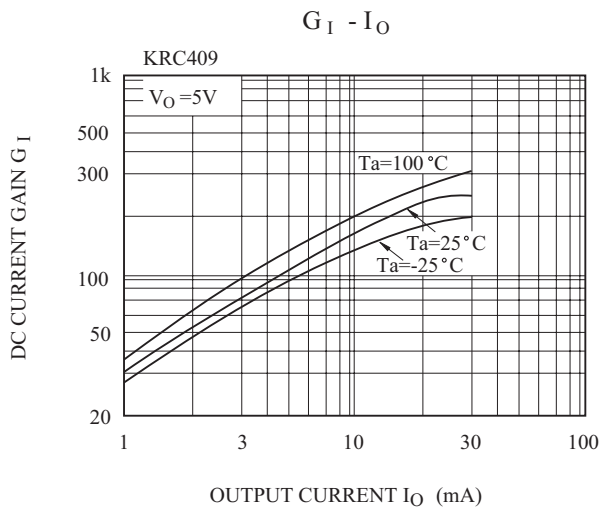
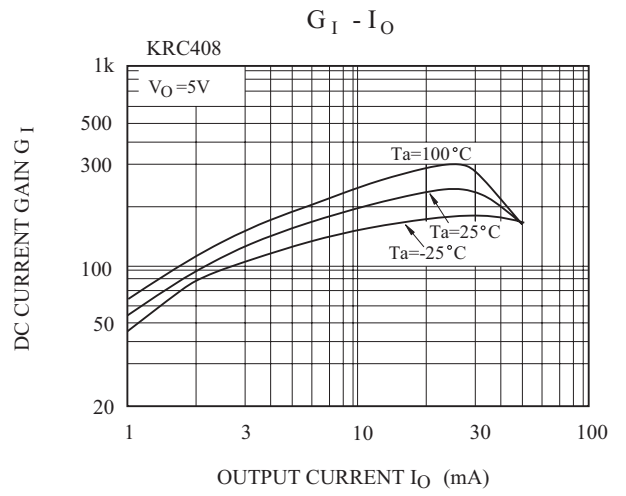
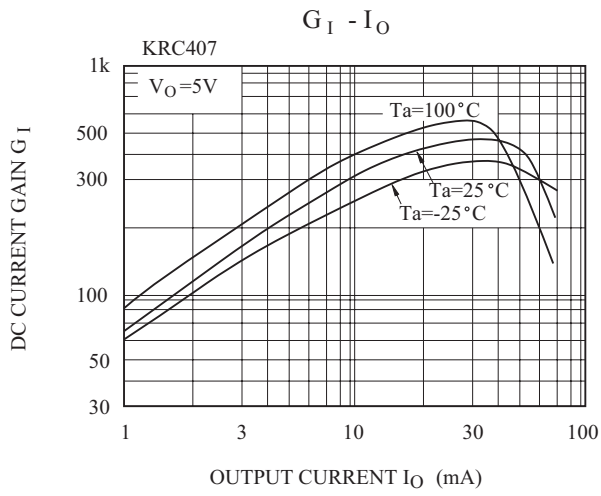
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Cut-off Current	KRC407~409	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA	
DC Current Gain	KRC407	$G_I$	$V_O=5V, I_O=10mA$	80	150	-		
	KRC408			80	150	-		
	KRC409			70	140	-		
Output Voltage	KRC407~409	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	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 Voltage (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	$t_r$	$V_O=5V, V_{IN}=5V$ $R_L=1k\Omega$	-	0.05	-	$\mu s$	
				KRC408	-	0.12		-
				KRC409	-	0.26		-
	Storage Time	$t_{stg}$		KRC407	-	2.0		-
				KRC408	-	2.4		-
				KRC409	-	1.5		-
	Fall Time	$t_f$		KRC407	-	0.36		-
				KRC408	-	0.4		-
				KRC409	-	0.41		-
Input Resistor	KRC407	R1	-	7	10	13	k $\Omega$	
	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.

# KRC407~KRC409



# KRC407~KRC409



## PRECAUTION ON USING KEC PRODUCTS

1. The products described in this data are intended to be used in general-purpose electronic equipment (Office equipment, telecommunication equipment, measuring equipment, home appliances)
2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.
3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.
4. The technical information described in this data is limited to showing representative characteristics and applied circuit examples of the products and it does not constitute the warranting of industrial property, the granting of relative rights, or the granting of any license.
5. What are described in the data may be changed without any prior notice to reflect new technical development. Please confirm that you have received the latest product standards or specification before final design, purchase or use.
6. Although KEC is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. KEC shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by KEC.