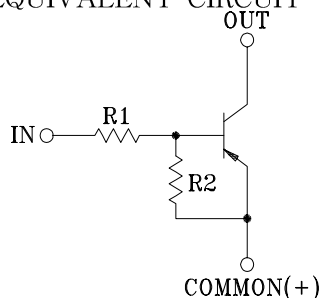


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER  
CIRCUIT APPLICATION.

#### FEATURES

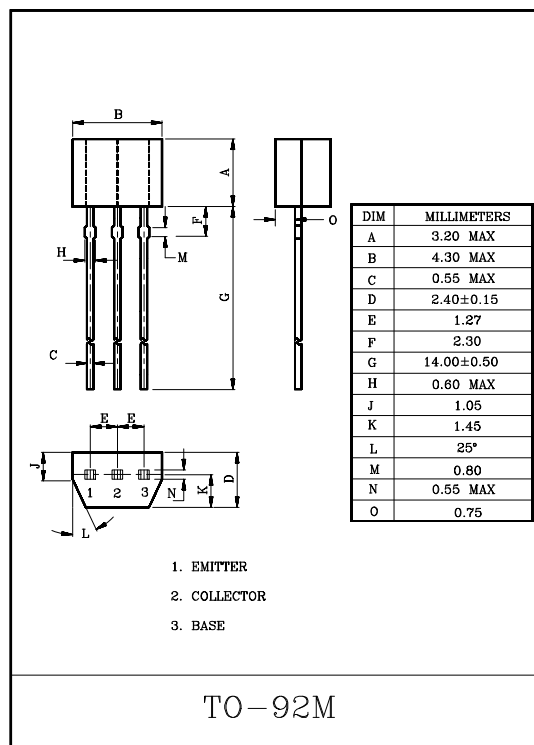
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

#### EQUIVALENT CIRCUIT



#### BIAS RESISTOR VALUES

| TYPE NO. | R1(k $\Omega$ ) | R2(k $\Omega$ ) |
|----------|-----------------|-----------------|
| KRA107M  | 10              | 47              |
| KRA108M  | 22              | 47              |
| KRA109M  | 47              | 22              |



#### MAXIMUM RATINGS(Ta=25°C)

| CHARACTERISTIC            |                  | SYMBOL           | RATING  | UNIT |
|---------------------------|------------------|------------------|---------|------|
| Output Voltage            | KRA107M<br>~109M | V <sub>O</sub>   | -50     | V    |
| Input Voltage             | KRA107M          | V <sub>I</sub>   | -30, 6  | V    |
|                           | KRA108M          |                  | -40, 7  |      |
|                           | KRA109M          |                  | -40, 15 |      |
| Output Current            | KRA107M<br>~109M | I <sub>O</sub>   | -100    | mA   |
| Power Dissipation         |                  | P <sub>D</sub>   | 400     | mW   |
| Junction Temperature      |                  | T <sub>j</sub>   | 150     | °C   |
| Storage Temperature Range |                  | T <sub>stg</sub> | -55~150 | °C   |

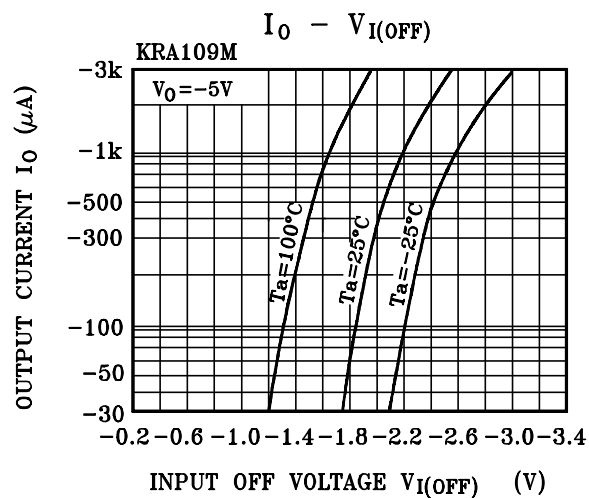
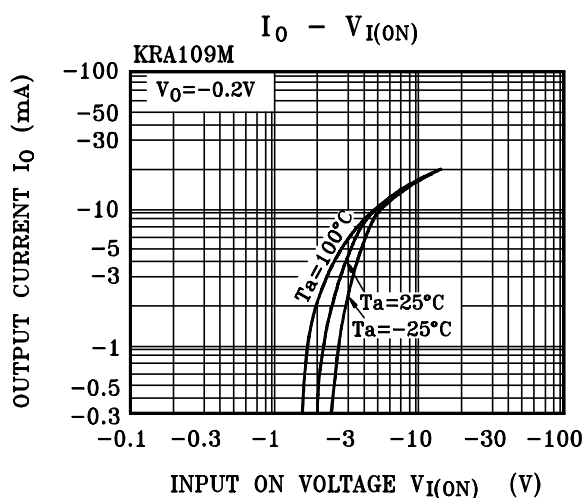
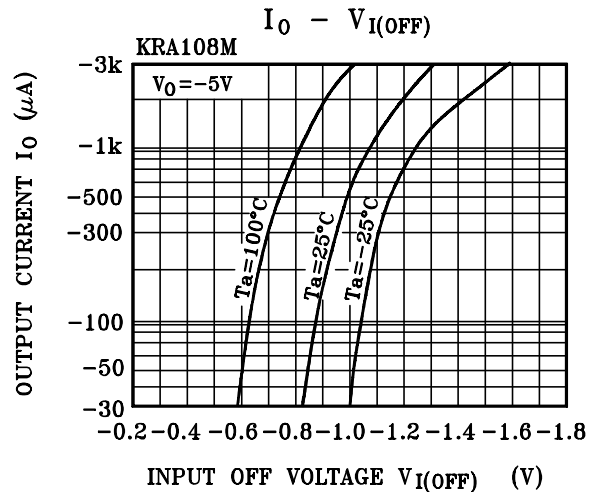
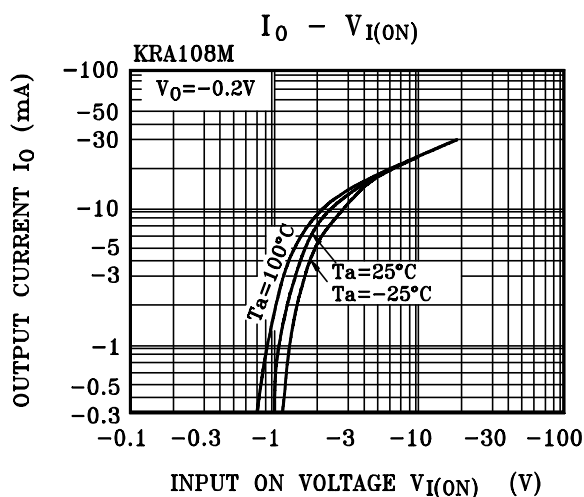
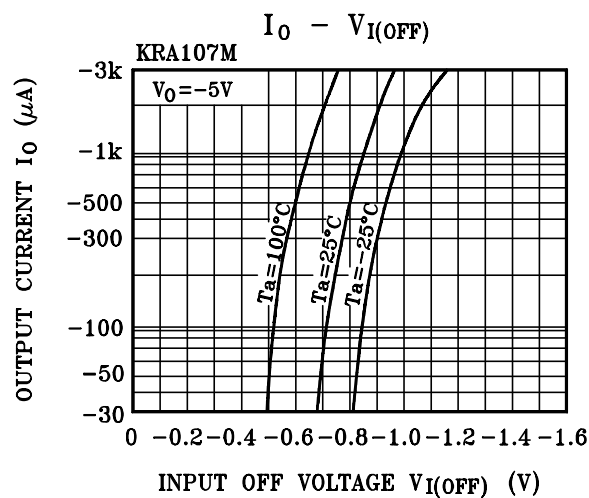
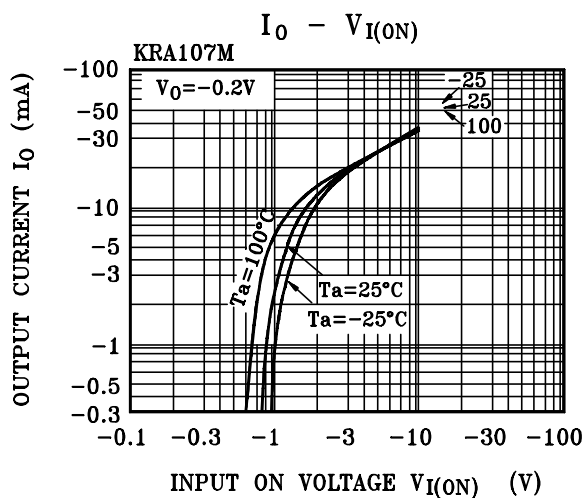
# KRA107M~KRA109M

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC         |              | SYMBOL       | TEST CONDITION                              | MIN. | TYP.  | MAX.  | UNIT    |
|------------------------|--------------|--------------|---------------------------------------------|------|-------|-------|---------|
| Output Cut-off Current | KRA107M~109M | $I_{O(OFF)}$ | $V_O=-50V, V_I=0$                           | -    | -     | -500  | nA      |
| DC Current Gain        | KRA107M      | $G_I$        | $V_O=-5V, I_O=-10mA$                        | 80   | 150   | -     |         |
|                        | KRA108M      |              |                                             | 80   | 150   | -     |         |
|                        | KRA109M      |              |                                             | 70   | 140   | -     |         |
| Output Voltage         | KRA107M~109M | $V_{O(ON)}$  | $I_O=-10mA, I_I=-0.5mA$                     | -    | -0.1  | -0.3  | V       |
| Input Voltage (ON)     | KRA107M      | $V_{I(ON)}$  | $V_O=-0.2V, I_O=-5mA$                       | -    | -1.2  | -1.8  | V       |
|                        | KRA108M      |              |                                             | -    | -1.8  | -2.6  |         |
|                        | KRA109M      |              |                                             | -    | -3.0  | -5.8  |         |
| Input Voltage (OFF)    | KRA107M      | $V_{I(OFF)}$ | $V_O=-5V, I_O=-0.1mA$                       | -0.5 | -0.75 | -     | V       |
|                        | KRA108M      |              |                                             | -0.6 | -0.88 | -     |         |
|                        | KRA109M      |              |                                             | -1.5 | -1.82 | -     |         |
| Transition Frequency   | KRA107M~109M | $f_T *$      | $V_O=-10V, I_O=-5mA$                        | -    | 200   | -     | MHz     |
| Input Current          | KRA107M      | $I_I$        | $V_I=-5V$                                   | -    | -     | -0.88 | mA      |
|                        | KRA108M      |              |                                             | -    | -     | -0.36 |         |
|                        | KRA109M      |              |                                             | -    | -     | -0.16 |         |
| Switching Time         | Rise Time    | KRA107M      | $V_O=-5V$<br>$V_{IN}=-5V$<br>$R_L=1k\Omega$ | -    | 0.07  | -     | $\mu S$ |
|                        |              | KRA108M      |                                             | -    | 0.20  | -     |         |
|                        |              | KRA109M      |                                             | -    | 0.38  | -     |         |
|                        | Storage Time | KRA107M      |                                             | -    | 1.1   | -     |         |
|                        |              | KRA108M      |                                             | -    | 0.3   | -     |         |
|                        |              | KRA109M      |                                             | -    | 0.7   | -     |         |
|                        | Fall Time    | KRA107M      |                                             | -    | 0.35  | -     |         |
|                        |              | KRA108M      |                                             | -    | 0.4   | -     |         |
|                        |              | KRA109M      |                                             | -    | 0.48  | -     |         |

Note : \*Characteristic of Transistor Only

# KRA107M~KRA109M



# KRA107M ~ KRA109M

