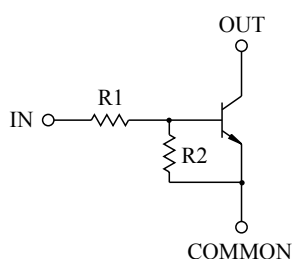


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

#### FEATURES

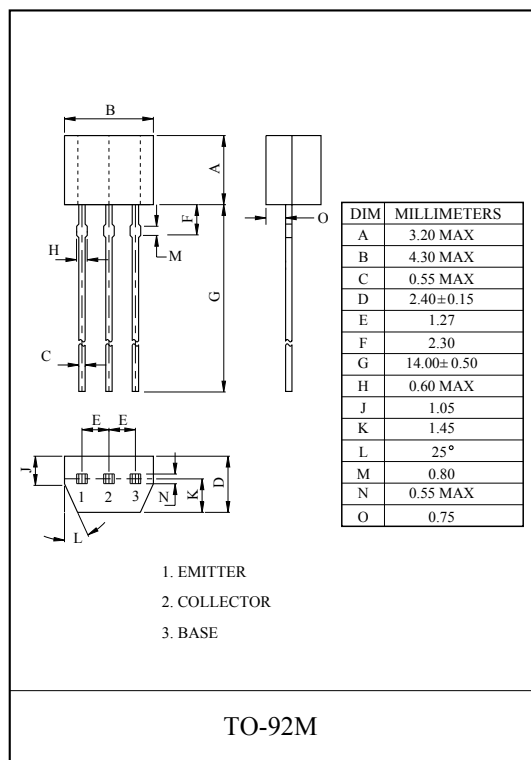
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process

#### EQUIVALENT CIRCUIT



#### BIAS RESISTOR VALUES

| TYPE NO. | R1(k $\Omega$ ) | R2(k $\Omega$ ) |
|----------|-----------------|-----------------|
| 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 | ℃    |

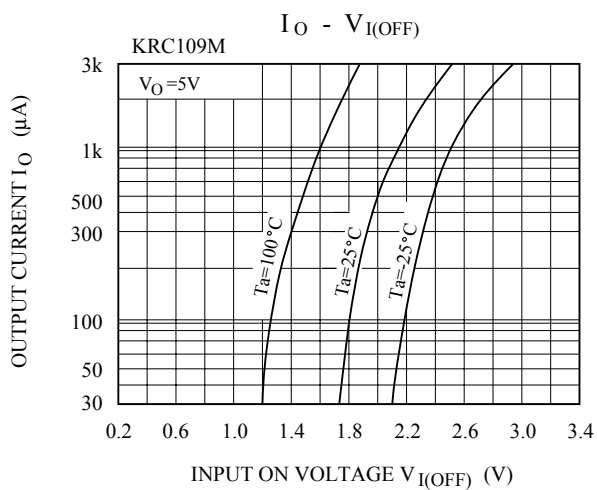
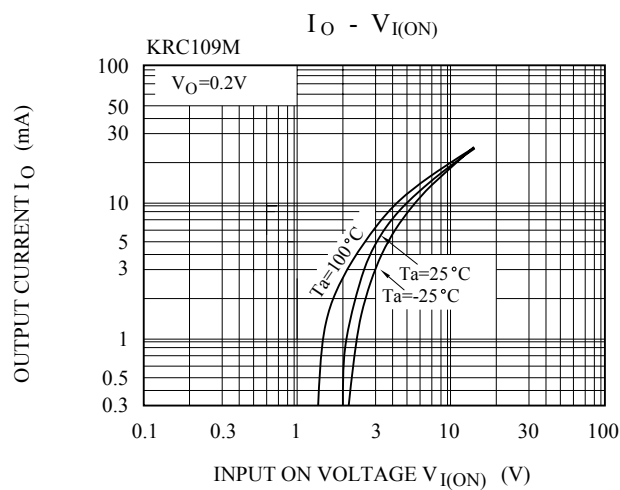
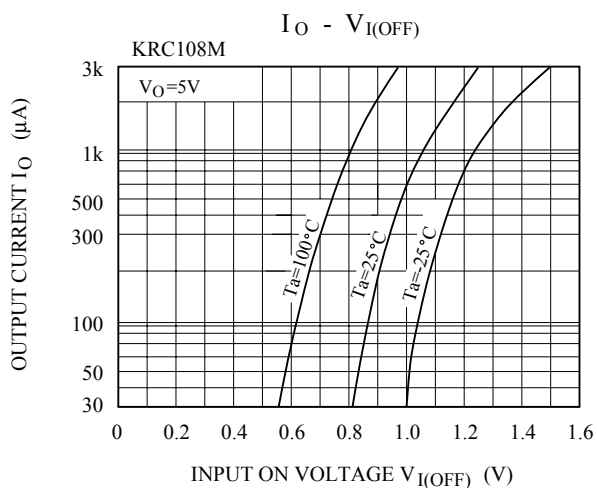
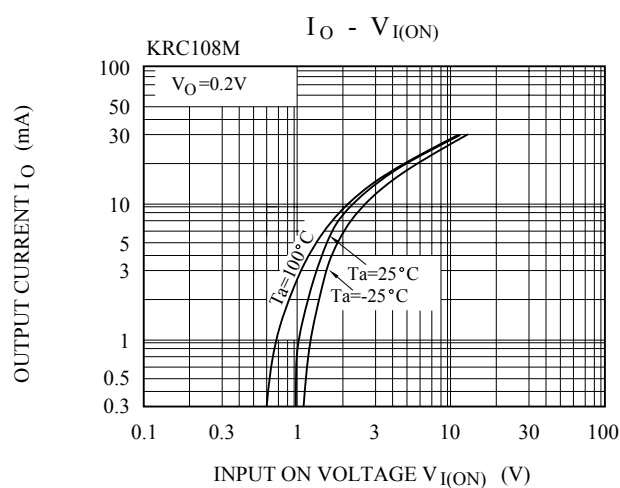
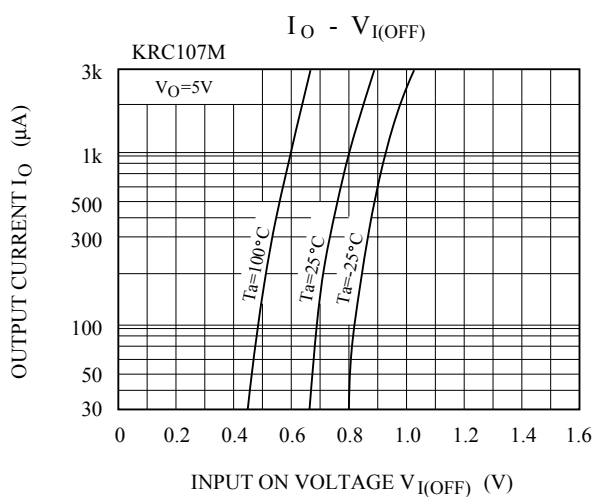
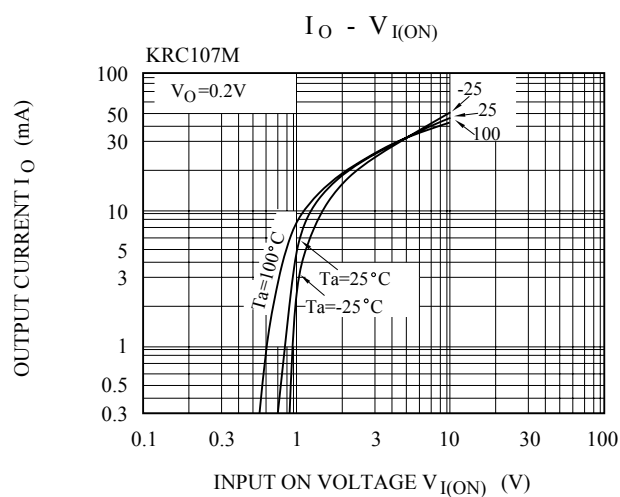
# KRC107M~KRC109M

## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC         |              | SYMBOL              | TEST CONDITION                            | MIN.                                                           | TYP.             | MAX. | UNIT |     |   |
|------------------------|--------------|---------------------|-------------------------------------------|----------------------------------------------------------------|------------------|------|------|-----|---|
| Output Cut-off Current |              | KRC107M ~ 109M      | I <sub>O(OFF)</sub>                       | V <sub>O</sub> =50V, V <sub>I</sub> =0                         | -                | -    | 500  | nA  |   |
| DC Current Gain        | KRC107M      | G <sub>I</sub>      | V <sub>O</sub> =5V, I <sub>O</sub> =10mA  | 80                                                             | 150              | -    |      |     |   |
|                        | KRC108M      |                     |                                           | 80                                                             | 150              | -    |      |     |   |
|                        | KRC109M      |                     |                                           | 70                                                             | 140              | -    |      |     |   |
| Output Voltage         |              | KRC107M ~ 109M      | V <sub>O(ON)</sub>                        | I <sub>O</sub> =10mA, I <sub>I</sub> =0.5mA                    | -                | 0.1  | 0.3  | V   |   |
| Input Voltage (ON)     | KRC107M      | V <sub>I(ON)</sub>  | V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA | -                                                              | 1.2              | 1.8  | V    |     |   |
|                        | KRC108M      |                     |                                           | -                                                              | 1.8              | 2.6  |      |     |   |
|                        | KRC109M      |                     |                                           | -                                                              | 3.0              | 5.8  |      |     |   |
| Input Votlage (OFF)    | KRC107M      | V <sub>I(OFF)</sub> | V <sub>O</sub> =5V, I <sub>O</sub> =0.1mA | 0.5                                                            | 0.75             | -    | V    |     |   |
|                        | KRC108M      |                     |                                           | 0.6                                                            | 0.88             | -    |      |     |   |
|                        | KRC109M      |                     |                                           | 1.5                                                            | 1.82             | -    |      |     |   |
| Transition Frequency   |              | KRC107M ~ 109M      | f <sub>T</sub> *                          | V <sub>O</sub> =10V, I <sub>O</sub> =5mA                       | -                | 200  | -    | MHz |   |
| Input Current          | KRC107M      | I <sub>I</sub>      | V <sub>I</sub> =5V                        | -                                                              | -                | 0.88 | mA   |     |   |
|                        | KRC108M      |                     |                                           | -                                                              | -                | 0.36 |      |     |   |
|                        | KRC109M      |                     |                                           | -                                                              | -                | 0.16 |      |     |   |
| Switching Time         | Rise Time    | KRC107M             | t <sub>r</sub>                            | V <sub>O</sub> =5V, V <sub>IN</sub> =5V<br>R <sub>L</sub> =1kΩ | -                | 0.05 | -    | μS  |   |
|                        |              | KRC108M             |                                           |                                                                | -                | 0.12 | -    |     |   |
|                        |              | KRC109M             |                                           |                                                                | -                | 0.26 | -    |     |   |
|                        | Storage Time | KRC107M             |                                           |                                                                | t <sub>stg</sub> | -    | 2.0  |     | - |
|                        |              | KRC108M             |                                           |                                                                |                  | -    | 2.4  |     | - |
|                        |              | KRC109M             |                                           |                                                                |                  | -    | 1.5  |     | - |
|                        | Fall Time    | KRC107M             |                                           |                                                                | t <sub>f</sub>   | -    | 0.36 |     | - |
|                        |              | KRC108M             |                                           |                                                                |                  | -    | 0.4  |     | - |
|                        |              | KRC109M             |                                           |                                                                |                  | -    | 0.41 |     | - |

Note : \* Characteristic of Transistor Only.

# KRC107M~KRC109M



# KRC107M~KRC109M

