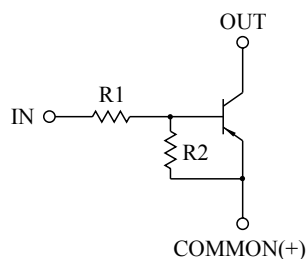


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

### FEATURES

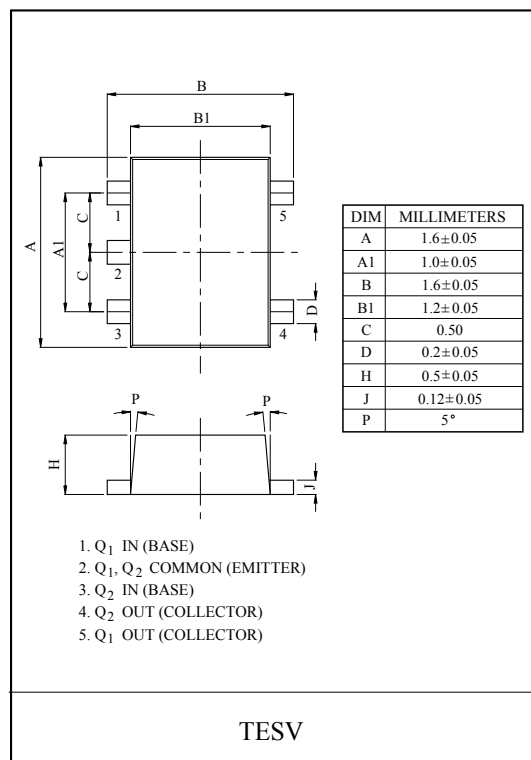
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- High Packing Density.

### EQUIVALENT CIRCUIT

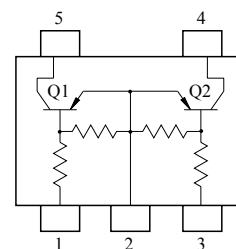


### BIAS RESISTOR VALUES

| TYPE NO. | R1(k $\Omega$ ) | R2(k $\Omega$ ) |
|----------|-----------------|-----------------|
| KRA557E  | 10              | 47              |
| KRA558E  | 22              | 47              |
| KRA559E  | 47              | 22              |



### EQUIVALENT CIRCUIT (TOP VIEW)



### MAXIMUM RATING (Ta=25°C)

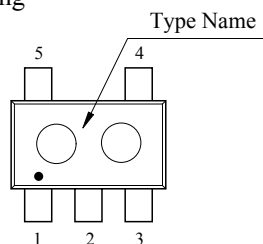
| CHARACTERISTIC            |                | SYMBOL           | RATING    | UNIT |
|---------------------------|----------------|------------------|-----------|------|
| Output Voltage            | KRA557E ~ 559E | V <sub>O</sub>   | -50       | V    |
| Input Voltage             | KRA557E        | V <sub>I</sub>   | -30, 6    | V    |
|                           | KRA558E        |                  | -40, 7    |      |
|                           | KRA559E        |                  | -40, 15   |      |
| Output Current            | KRA557E ~ 559E | I <sub>O</sub>   | -100      | mA   |
| Power Dissipation         |                | P <sub>D</sub> * | 200       | mW   |
| Junction Temperature      |                | T <sub>j</sub>   | 150       | ℃    |
| Storage Temperature Range |                | T <sub>stg</sub> | -55 ~ 150 | ℃    |

\* Total Rating.

### MARK SPEC

| TYPE | KRA557E | KRA558E | KRA559E |
|------|---------|---------|---------|
| MARK | PH      | PI      | PJ      |

### Marking



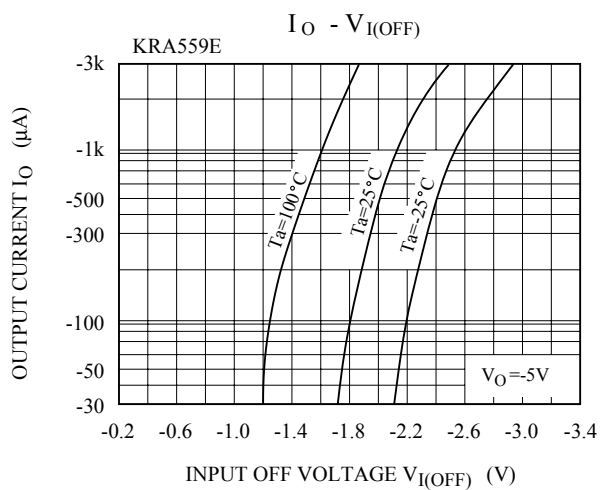
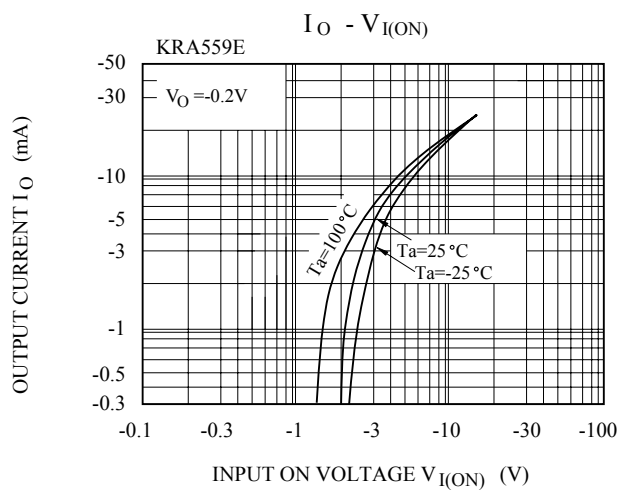
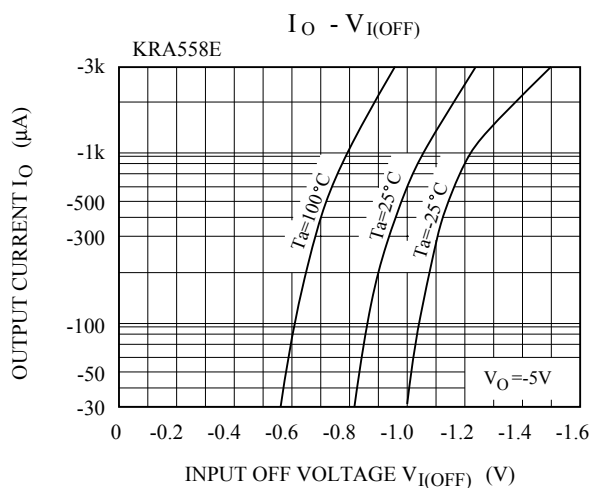
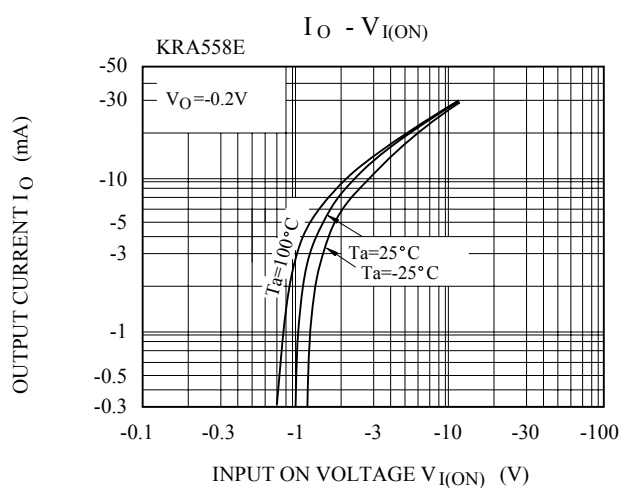
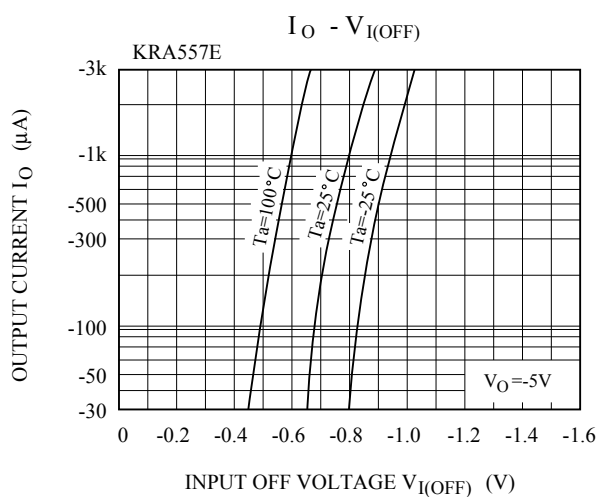
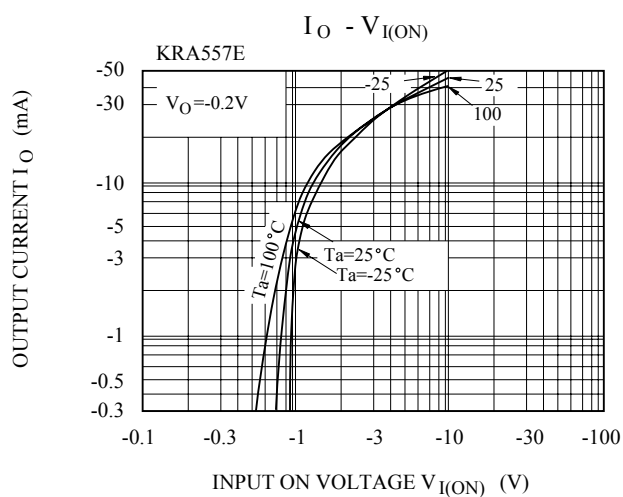
# KRA557E~KRA559E

## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC         |                | SYMBOL       | TEST CONDITION                          | MIN. | TYP.  | MAX.  | UNIT    |
|------------------------|----------------|--------------|---|------|-------|-------|---------|
| Output Cut-off Current | KRA557E ~ 559E | $I_{O(OFF)}$ | $V_O=-50V, V_I=0$                       | -    | -     | -500  | nA      |
| DC Current Gain        | KRA557E        | $G_I$        | $V_O=-5V, I_O=-10mA$                    | 80   | 150   | -     |         |
|                        | KRA558E        |              |   | 80   | 150   | -     |         |
|                        | KRA559E        |              |   | 70   | 140   | -     |         |
| Output Voltage         | KRA557E ~ 559E | $V_{O(ON)}$  | $I_O=-10mA, I_I=-0.5mA$                 | -    | -0.1  | -0.3  | V       |
| Input Voltage (ON)     | KRA557E        | $V_{I(ON)}$  | $V_O=-0.2V, I_O=-5mA$                   | -    | -1.2  | -1.8  | V       |
|                        | KRA558E        |              |   | -    | -1.8  | -2.6  |         |
|                        | KRA559E        |              |   | -    | -3.0  | -5.8  |         |
| Input Voltage (OFF)    | KRA557E        | $V_{I(OFF)}$ | $V_O=-5V, I_O=-0.1mA$                   | -0.5 | -0.75 | -     | V       |
|                        | KRA558E        |              |   | -0.6 | -0.88 | -     |         |
|                        | KRA559E        |              |   | -1.5 | -1.82 | -     |         |
| Transition Frequency   | KRA557E ~ 559E | $f_T^*$      | $V_O=-10V, I_O=-5mA$                    | -    | 200   | -     | MHz     |
| Input Current          | KRA557E        | $I_I$        | $V_I=-5V$                               | -    | -     | -0.88 | mA      |
|                        | KRA558E        |              |   | -    | -     | -0.36 |         |
|                        | KRA559E        |              |   | -    | -     | -0.16 |         |
| Switching Time         | Rise Time      | KRA557E      | $V_O=-5V, V_{IN}=-5V$<br>$R_L=1k\Omega$ | -    | 0.07  | -     | $\mu S$ |
|                        |                | KRA558E      |   | -    | 0.20  | -     |         |
|                        |                | KRA559E      |   | -    | 0.38  | -     |         |
|                        | Storage Time   | KRA557E      |   | -    | 1.1   | -     |         |
|                        |                | KRA558E      |   | -    | 1.3   | -     |         |
|                        |                | KRA559E      |   | -    | 0.7   | -     |         |
|                        | Fall Time      | KRA557E      |   | -    | 0.35  | -     |         |
|                        |                | KRA558E      |   | -    | 0.4   | -     |         |
|                        |                | KRA559E      |   | -    | 0.48  | -     |         |

Note : \* Characteristic of Transistor Only.

# KRA557E~KRA559E



# KRA557E~KRA559E

