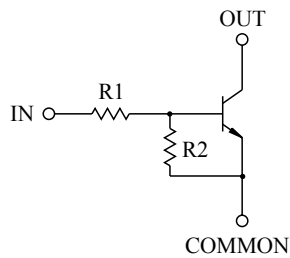


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

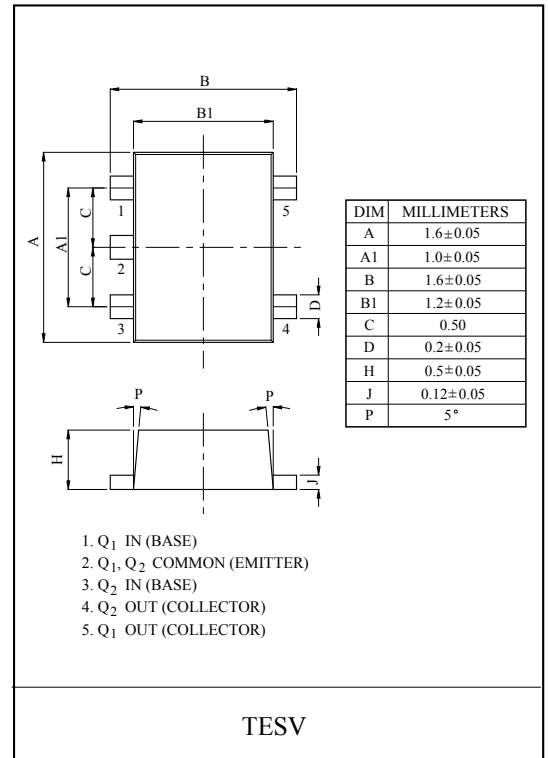
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Packing Density.

EQUIVALENT CIRCUIT

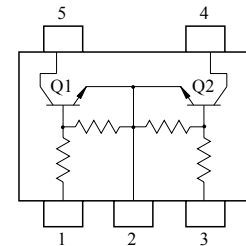


BIAS RESISTOR VALUES

| TYPE NO. | R1(kΩ) | R2(kΩ) |
|----------|--------|--------|
| KRC657E | 10 | 47 |
| KRC658E | 22 | 47 |
| KRC659E | 47 | 22 |



EQUIVALENT CIRCUIT (TOP VIEW)



MAXIMUM RATING (Ta=25°C)

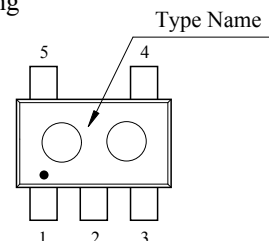
| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|---------------------------|----------------|------------------|-----------|------|
| Output Voltage | KRC657E ~ 659E | V _O | 50 | V |
| Input Voltage | KRC657E | V _I | 30, -6 | V |
| | KRC658E | | 40, -7 | |
| | KRC659E | | 40, -15 | |
| Output Current | KRC657E ~ 659E | I _O | 100 | mA |
| Power Dissipation | | P _D * | 200 | mW |
| Junction Temperature | | T _j | 150 | °C |
| Storage Temperature Range | | T _{stg} | -55 ~ 150 | °C |

* Total Rating.

Marking

MARK SPEC

| TYPE | KRC657E | KRC658E | KRC659E |
|------|---------|---------|---------|
| MARK | NH | NI | NJ |



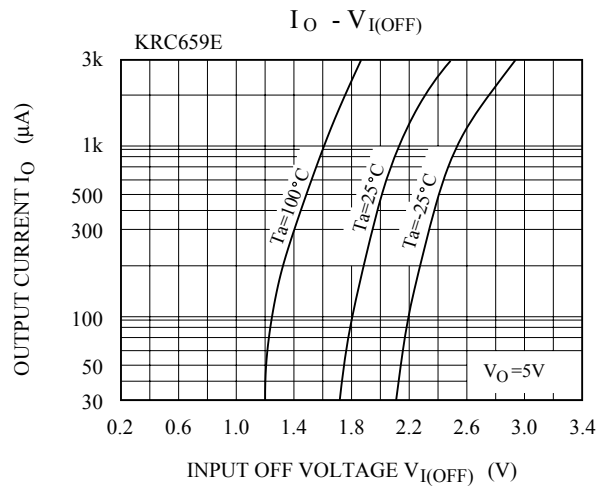
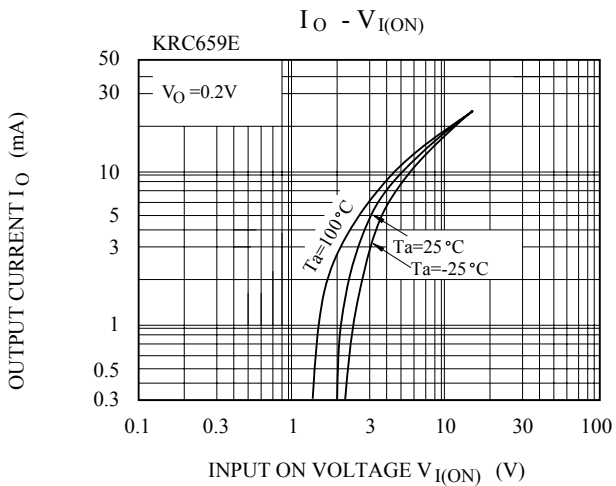
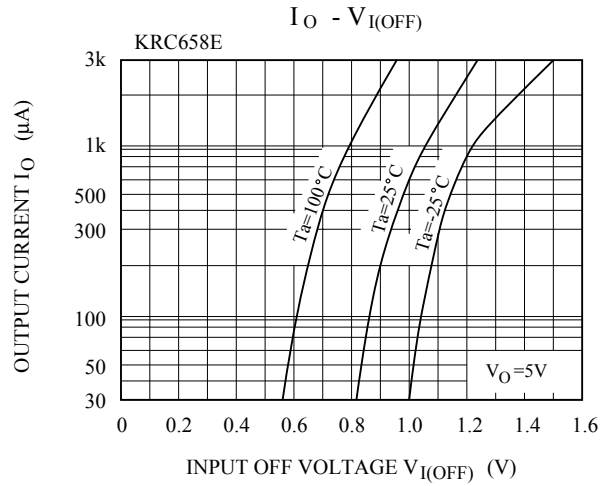
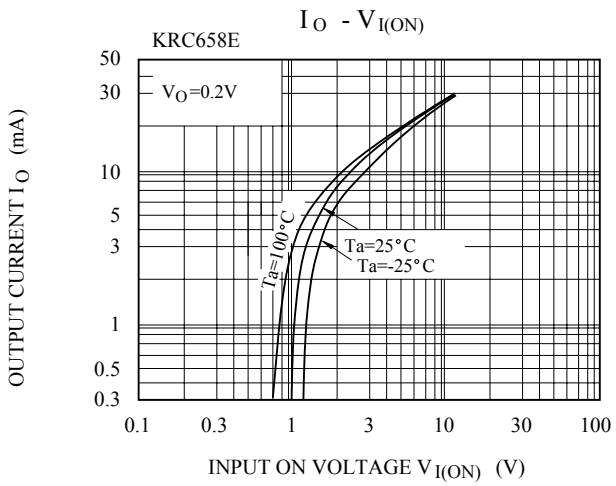
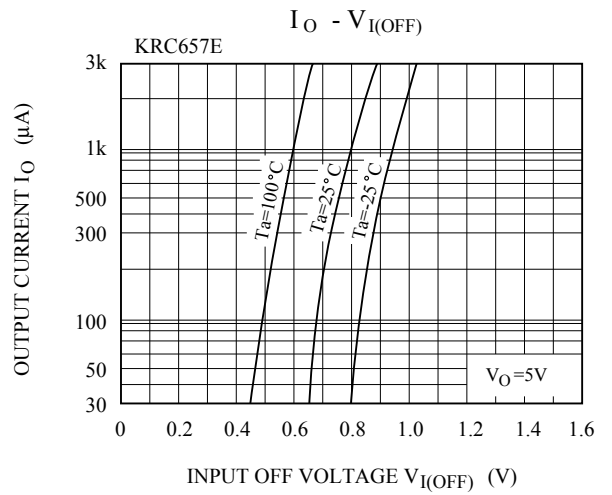
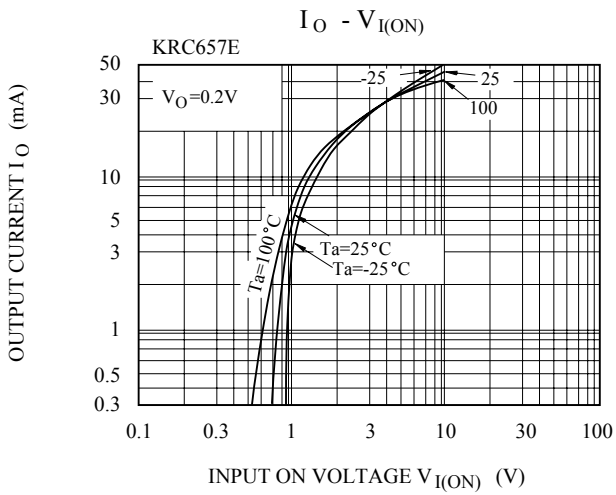
KRC657E~KRC659E

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|------------------------|----------------|--------------|---------------------------------------|---------|------|------|---------|---|
| Output Cut-off Current | KRC657E ~ 659E | $I_{O(OFF)}$ | $V_O=50V, V_I=0$ | - | - | 500 | nA | |
| DC Current Gain | KRC657E | G_I | $V_O=5V, I_O=10mA$ | 80 | 150 | - | | |
| | KRC658E | | | 80 | 150 | - | | |
| | KRC659E | | | 70 | 140 | - | | |
| Output Voltage | KRC657E ~ 659E | $V_{O(ON)}$ | $I_O=10mA, I_I=0.5mA$ | - | 0.1 | 0.3 | V | |
| Input Voltage (ON) | KRC657E | $V_{I(ON)}$ | $V_O=0.2V, I_O=5mA$ | - | 1.2 | 1.8 | V | |
| | KRC658E | | | - | 1.8 | 2.6 | | |
| | KRC659E | | | - | 3.0 | 5.8 | | |
| Input Voltage (OFF) | KRC657E | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$ | 0.5 | 0.75 | - | V | |
| | KRC658E | | | 0.6 | 0.88 | - | | |
| | KRC659E | | | 1.5 | 1.82 | - | | |
| Transition Frequency | KRC657E ~ 659E | f_T^* | $V_O=10V, I_O=5mA$ | - | 200 | - | MHz | |
| Input Current | KRC657E | I_I | $V_I=5V$ | - | - | 0.88 | mA | |
| | KRC658E | | | - | - | 0.36 | | |
| | KRC659E | | | - | - | 0.16 | | |
| Switching Time | Rise Time | t_r | $V_O=5V, V_{IN}=5V$ $R_L=1k\Omega$ | - | 0.05 | - | μS | |
| | | | | KRC658E | - | 0.12 | | - |
| | | | | KRC659E | - | 0.26 | | - |
| | Storage Time | t_{stg} | | KRC657E | - | 2.0 | | - |
| | | | | KRC658E | - | 2.4 | | - |
| | | | | KRC659E | - | 1.5 | | - |
| | Fall Time | t_f | | KRC657E | - | 0.36 | | - |
| | | | | KRC658E | - | 0.4 | | - |
| | | | | KRC659E | - | 0.41 | | - |

Note : * Characteristic of Transistor Only.

KRC657E~KRC659E



KRC657E~KRC659E

