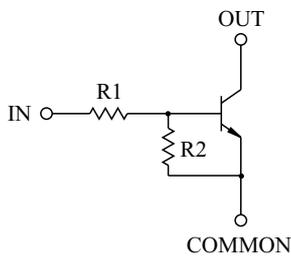


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

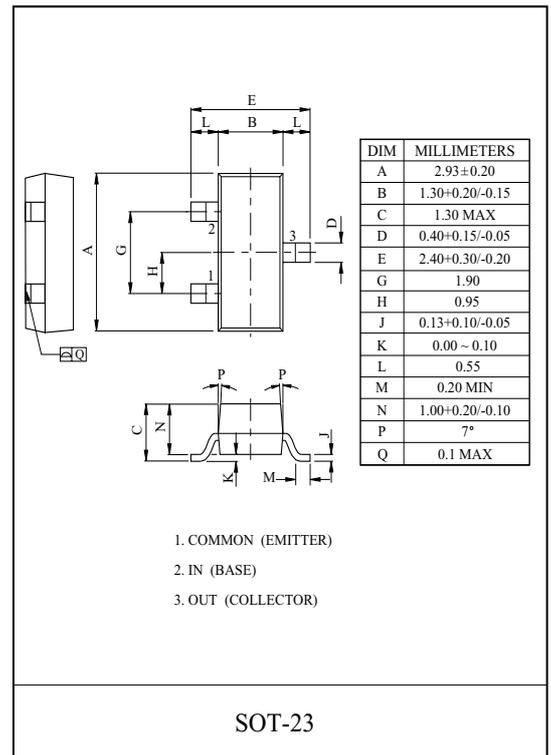
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

| TYPE NO. | R1(k) | R2(k) |
|----------|--------|--------|
| KRC107S | 10 | 47 |
| KRC108S | 22 | 47 |
| KRC109S | 47 | 22 |



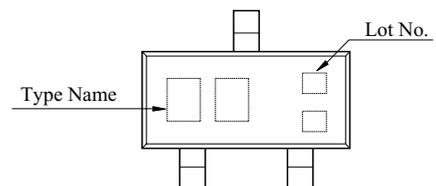
MAXIMUM RATING (Ta=25)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|---------------------------|--------------|-----------|---------|------|
| Output Voltage | KRC107S 109S | V_o | 50 | V |
| Input Voltage | KRC107S | V_i | 30, -6 | V |
| | KRC108S | | 40, -7 | |
| | KRC109S | | 40, -15 | |
| Output Current | KRC107S 109S | I_o | 100 | mA |
| Power Dissipation | | P_D | 200 | mW |
| Junction Temperature | | T_j | 150 | |
| Storage Temperature Range | | T_{stg} | -55 150 | |

MARK SPEC

| TYPE | KRC107S | KRC108S | KRC109S |
|------|---------|---------|---------|
| MARK | NH | NI | NJ |

Marking



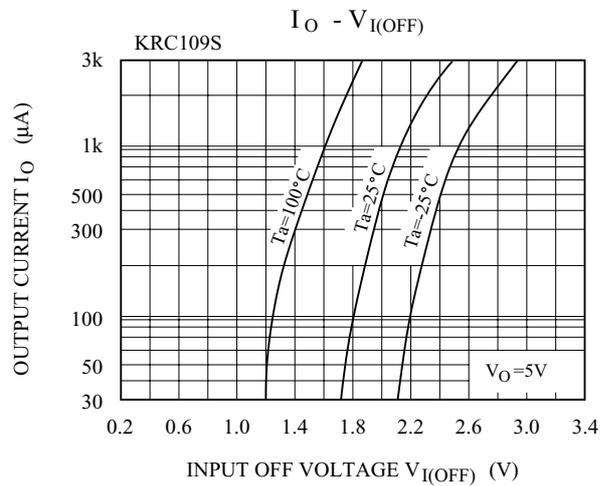
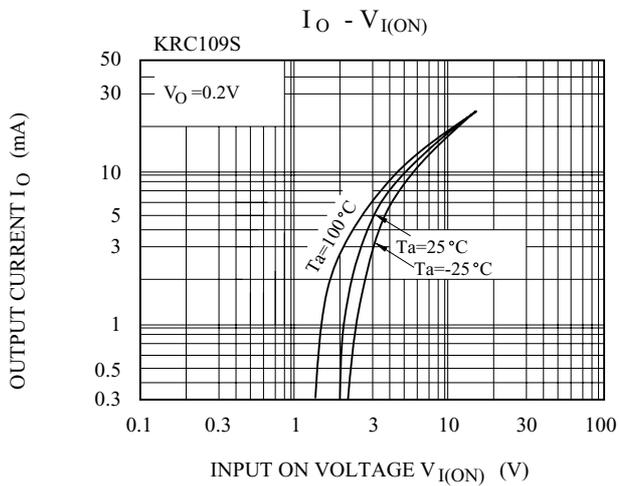
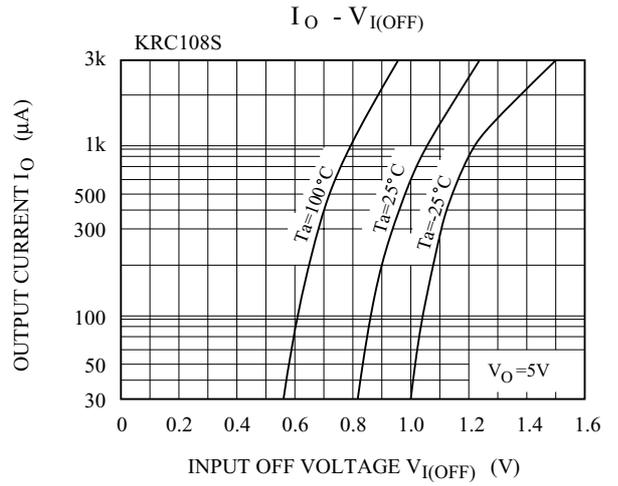
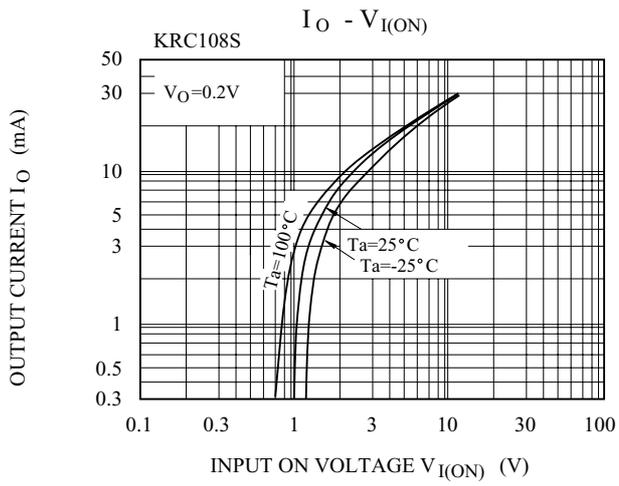
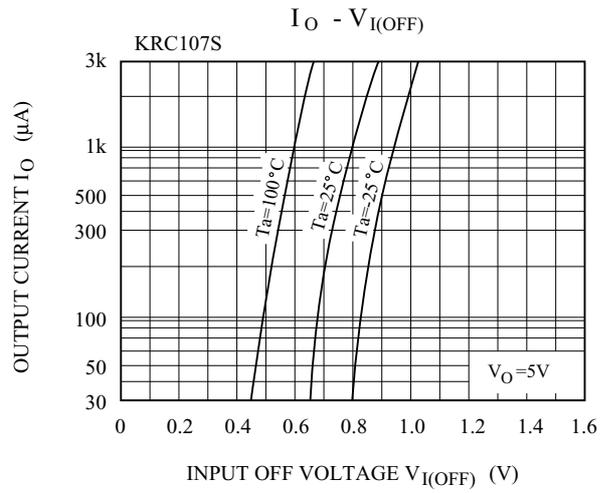
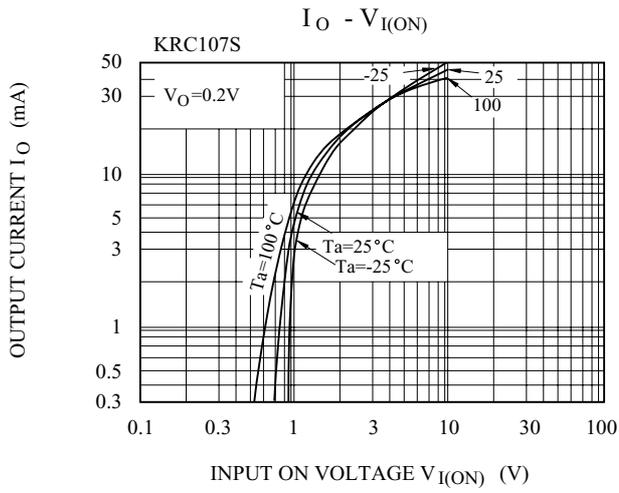
KRC107S~KRC109S

ELECTRICAL CHARACTERISTICS (Ta=25)

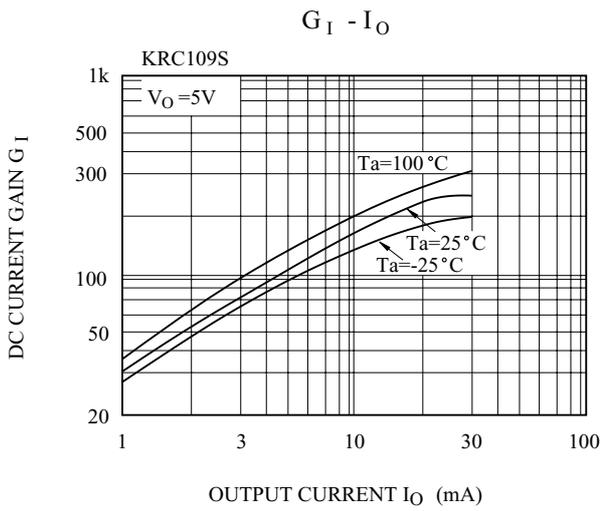
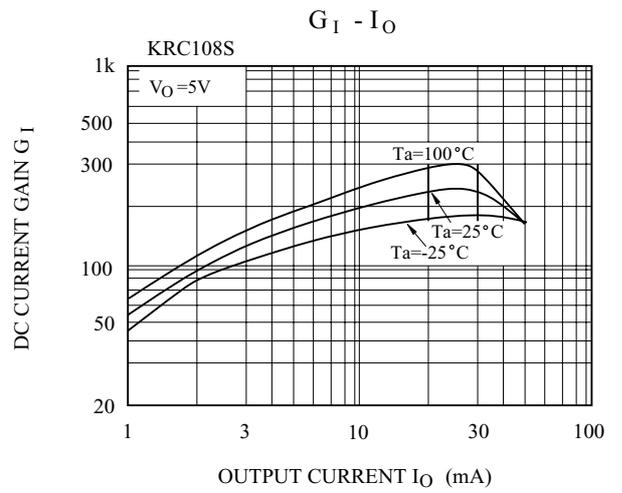
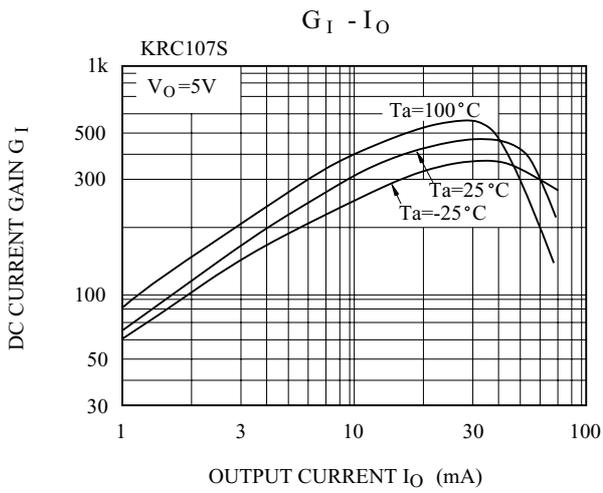
| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|------------------------|--------------|--------------|----------------|---------------------------------|------|------|------|---------|
| Output Cut-off Current | | KRC107S 109S | $I_{O(OFF)}$ | $V_O=50V, V_I=0$ | - | - | 500 | nA |
| DC Current Gain | KRC107S | | G_I | $V_O=5V, I_O=10mA$ | 80 | 150 | - | |
| | KRC108S | | | | 80 | 150 | - | |
| | KRC109S | | | | 70 | 140 | - | |
| Output Voltage | | KRC107S 109S | $V_{O(ON)}$ | $I_O=10mA, I_I=0.5mA$ | - | 0.1 | 0.3 | V |
| Input Voltage (ON) | KRC107S | | $V_{I(ON)}$ | $V_O=0.2V, I_O=5mA$ | - | 1.2 | 1.8 | V |
| | KRC108S | | | | - | 1.8 | 2.6 | |
| | KRC109S | | | | - | 3.0 | 5.8 | |
| Input Voltage (OFF) | KRC107S | | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$ | 0.5 | 0.75 | - | V |
| | KRC108S | | | | 0.6 | 0.88 | - | |
| | KRC109S | | | | 1.5 | 1.82 | - | |
| Transition Frequency | | KRC107S 109S | f_T^* | $V_O=10V, I_O=5mA$ | - | 200 | - | MHz |
| Input Current | KRC107S | | I_I | $V_I=5V$ | - | - | 0.88 | mA |
| | KRC108S | | | | - | - | 0.36 | |
| | KRC109S | | | | - | - | 0.16 | |
| Switching Time | Rise Time | KRC107S | t_r | $V_O=5V, V_{IN}=5V$ $R_L=1k$ | - | 0.05 | - | μs |
| | | KRC108S | | | - | 0.12 | - | |
| | | KRC109S | | | - | 0.26 | - | |
| | Storage Time | KRC107S | t_{stg} | | - | 2.0 | - | |
| | | KRC108S | | | - | 2.4 | - | |
| | | KRC109S | | | - | 1.5 | - | |
| | Fall Time | KRC107S | t_f | | - | 0.36 | - | |
| | | KRC108S | | | - | 0.4 | - | |
| | | KRC109S | | | - | 0.41 | - | |
| Input Resistor | | KRC107S | R1 | - | 7 | 10 | 13 | k |
| | | KRC108S | | 15.4 | 22 | 28.6 | | |
| | | KRC109S | | 32.9 | 47 | 61.1 | | |
| Resistor Ratio | | KRC107S | R2/R1 | - | 3.7 | 4.7 | 5.7 | |
| | | KRC108S | | 1.7 | 2.1 | 2.6 | | |
| | | KRC109S | | 0.37 | 0.47 | 0.57 | | |

Note : * Characteristic of Transistor Only.

KRC107S~KRC109S



KRC107S~KRC109S



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