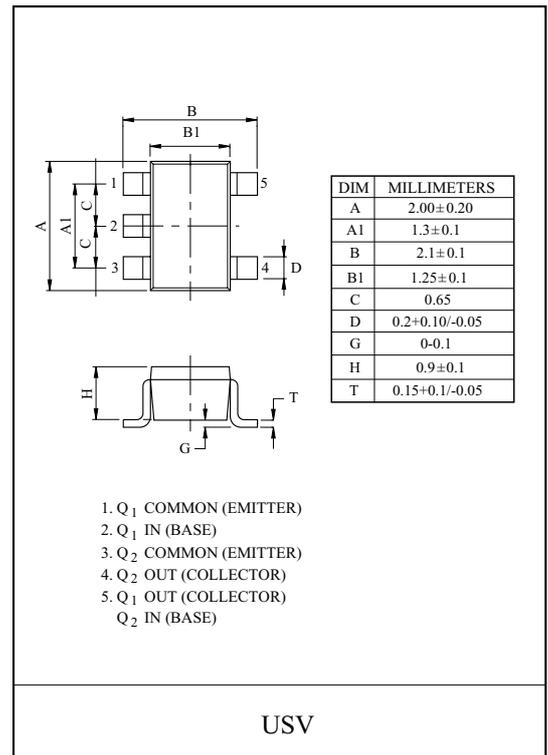
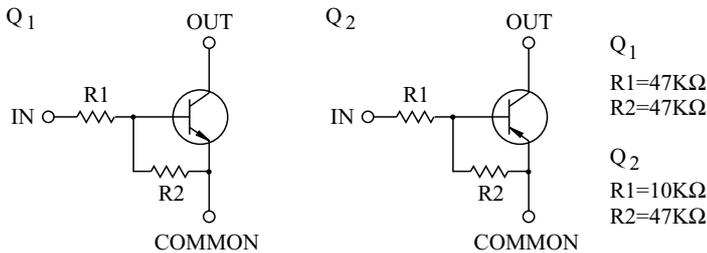


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

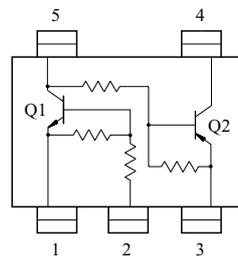
FEATURES

- Including two devices in USV.
(Ultra Super mini type with 5 leads.)
- With Built-in bias resistors.
- Simplify circuit design.
- Reduce a quantity of parts and manufacturing process.

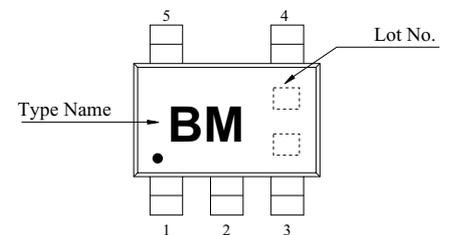
EQUIVALENT CIRCUIT



EQUIVALENT CIRCUIT (TOP VIEW)



Marking



Q1 MAXIMUM RATING (Ta=25 °C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|----------------|----------------|---------|------|
| Output Voltage | V _O | 50 | V |
| Input Voltage | V _I | 40, -10 | V |
| Output Current | I _O | 100 | mA |

Q2 MAXIMUM RATING (Ta=25 °C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|----------------|----------------|--------|------|
| Output Voltage | V _O | -50 | V |
| Input Voltage | V _I | -30, 6 | V |
| Output Current | I _O | -100 | mA |

Q1, Q2 MAXIMUM RATING (Ta=25 °C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|------------------|---------|------|
| Power Dissipation | P _D * | 200 | mW |
| Junction Temperature | T _j | 150 | |
| Storage Temperature Range | T _{stg} | -55 150 | |

* Total Rating.

KRX102U

Q1 ELECTRICAL CHARACTERISTICS (Ta=25)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT. |
|------------------------|--------------|-----------------------|------|------|------|-------|
| Output Cut-off Current | $I_{O(OFF)}$ | $V_O=50V, V_I=0$ | - | - | 500 | nA |
| DC Current Gain | G_I | $V_O=5V, I_O=10mA$ | 80 | 200 | - | |
| Output Voltage | $V_{O(ON)}$ | $I_O=10mA, I_I=0.5mA$ | - | 0.1 | 0.3 | V |
| Input Voltage (ON) | $V_{I(ON)}$ | $V_O=0.2V, I_O=5mA$ | - | 2.8 | 5.0 | V |
| Input Voltage (OFF) | $V_{I(OFF)}$ | $V_O=5V, I_O=0.1mA$ | 1.0 | 1.2 | - | V |
| Transition Frequency | f_T^* | $V_O=10V, I_O=5mA$ | - | 200 | - | MHz |
| Input Current | I_I | $V_I=5V$ | - | - | 0.18 | mA |
| Input Resistor | R1 | - | 32.9 | 47 | 61.1 | kΩ |
| Resistor Ratio | R_2/R_1 | - | 0.8 | 1 | 1.2 | - |

Note : * Characteristic of Transistor Only.

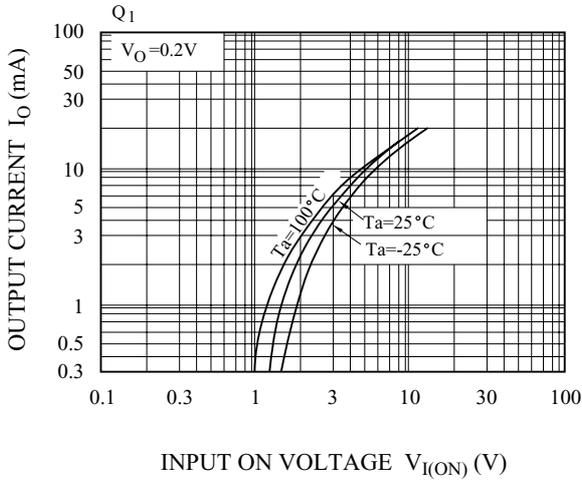
Q2 ELECTRICAL CHARACTERISTICS (Ta=25)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT. |
|------------------------|--------------|-------------------------|------|-------|-------|-------|
| Output Cut-off Current | $I_{O(OFF)}$ | $V_O=-50V, V_I=0$ | - | - | -500 | nA |
| DC Current Gain | G_I | $V_O=-5V, I_O=-10mA$ | 80 | 150 | - | |
| Output Voltage | $V_{O(ON)}$ | $I_O=-10mA, I_I=-0.5mA$ | - | -0.1 | -0.3 | V |
| Input Voltage (ON) | $V_{I(ON)}$ | $V_O=-0.2V, I_O=-5mA$ | - | -1.2 | -1.8 | V |
| Input Voltage (OFF) | $V_{I(OFF)}$ | $V_O=-5V, I_O=-0.1mA$ | -0.5 | -0.75 | - | V |
| Transition Frequency | f_T^* | $V_O=-10V, I_O=-5mA$ | - | 200 | - | MHz |
| Input Current | I_I | $V_I=-5V$ | - | - | -0.88 | mA |
| Input Resistor | R1 | - | 7 | 10 | 13 | kΩ |
| Resistor Ratio | R_2/R_1 | - | 3.7 | 4.7 | 5.7 | - |

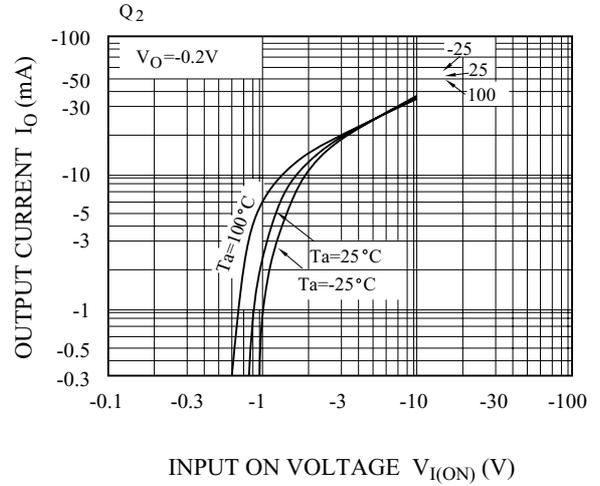
Note : * Characteristic of Transistor Only.

KRX102U

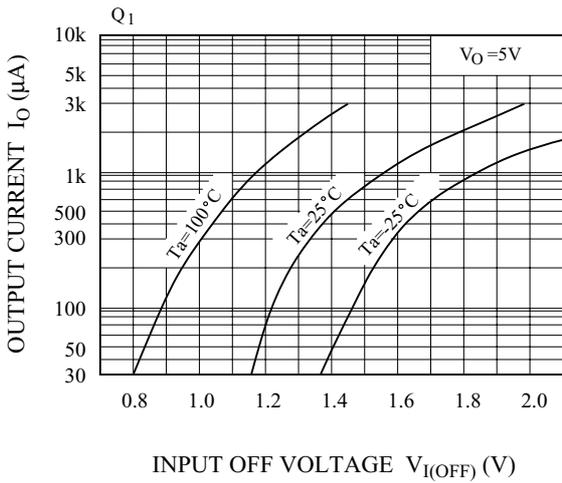
$I_O - V_{I(ON)}$



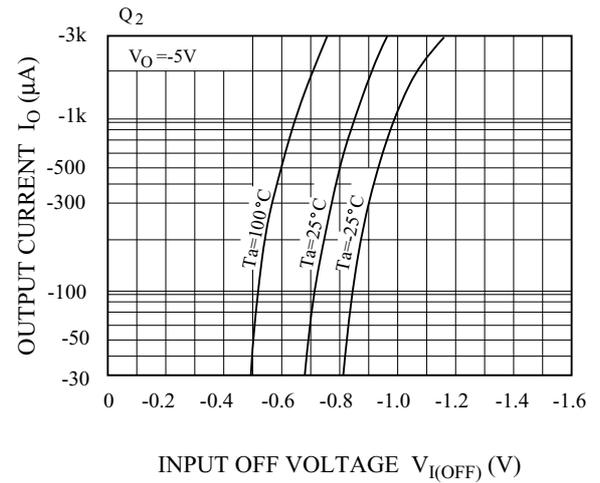
$I_O - V_{I(ON)}$



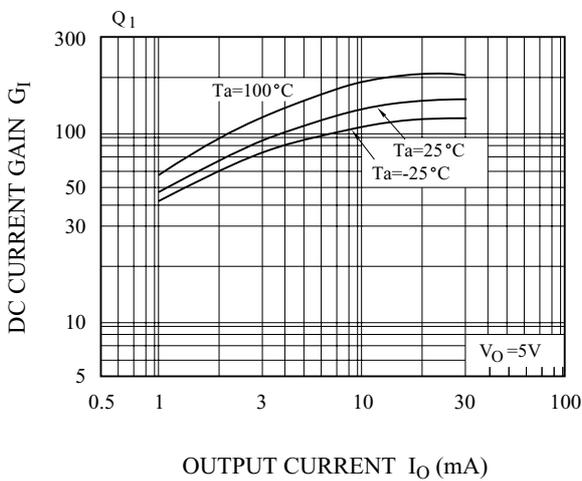
$I_O - V_{I(OFF)}$



$I_O - V_{I(OFF)}$



$G_I - I_O$



$G_I - I_O$

