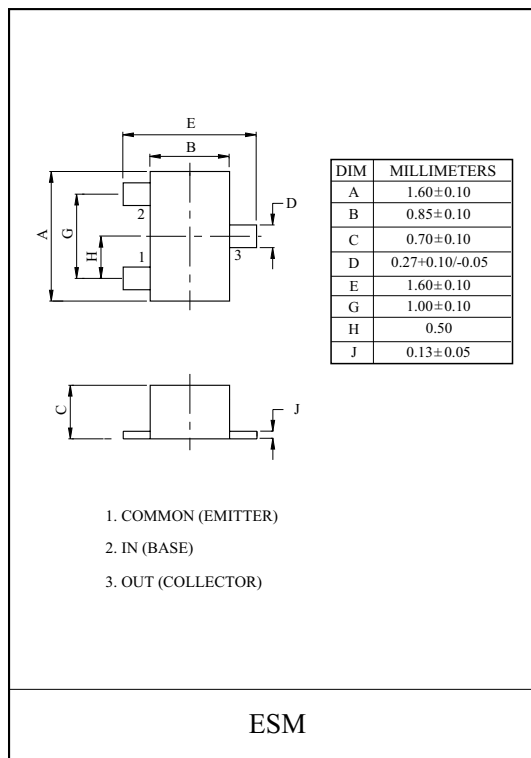
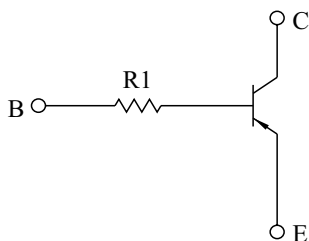


SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT



MAXIMUM RATING (Ta=25℃)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|--------|------|
| Collector-Base Voltage | V_{CBO} | -50 | V |
| Collector-Emitter Voltage | V_{CEO} | -50 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -100 | mA |

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|-----------|------|
| Collector Power Dissipation | P_C | 100 | mW |
| Junction Temperature | T_j | 150 | ℃ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | ℃ |

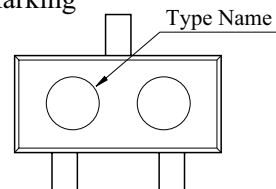
ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---------|---------------|-------------------------|------|------|------|------|
| Collector Cut-off Current | | I_{CBO} | $V_{CB}=-50V, I_E=0$ | - | - | -100 | nA |
| Emitter Cut-off Current | | I_{EBO} | $V_{EB}=-5V, I_C=0$ | - | - | -100 | nA |
| DC Current Gain | | h_{FE} | $V_{CE}=-5V, I_C=-1mA$ | 120 | - | - | |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | $I_C=-10mA, I_B=-0.5mA$ | - | -0.1 | -0.3 | V |
| Transition Frequency | | f_T^* | $V_{CE}=-10V, I_C=-5mA$ | - | 250 | - | MHz |
| Input Resistor | KRA310E | R_1 | | - | 4.7 | - | kΩ |
| | KRA311E | | | - | 10 | - | |
| | KRA312E | | | - | 100 | - | |
| | KRA313E | | | - | 22 | - | |
| | KRA314E | | | - | 47 | - | |

MARK SPEC

| TYPE | KRA310E | KRA311E | KRA312E | KRA313E | KRA314E |
|------|---------|---------|---------|---------|---------|
| MARK | PK | PM | PN | PO | PP |

Marking

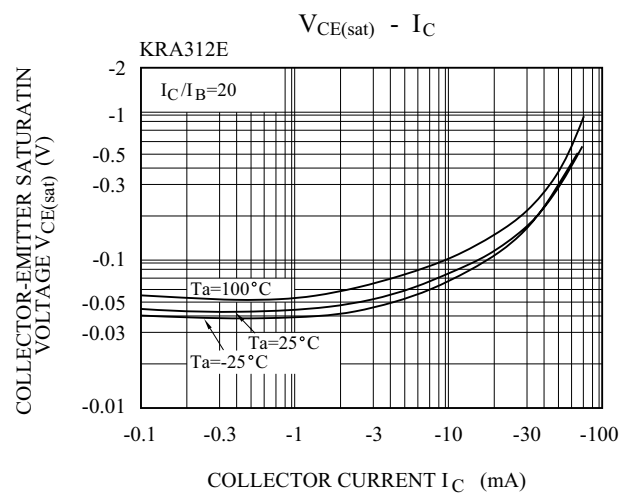
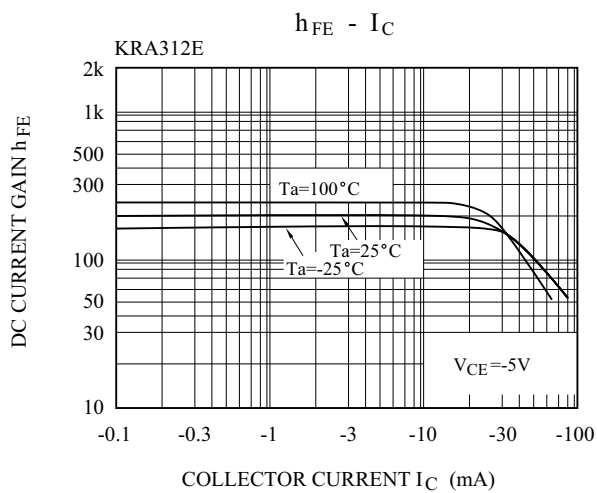
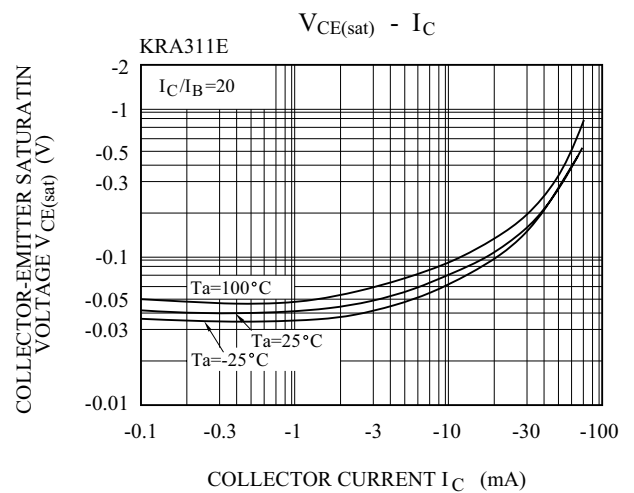
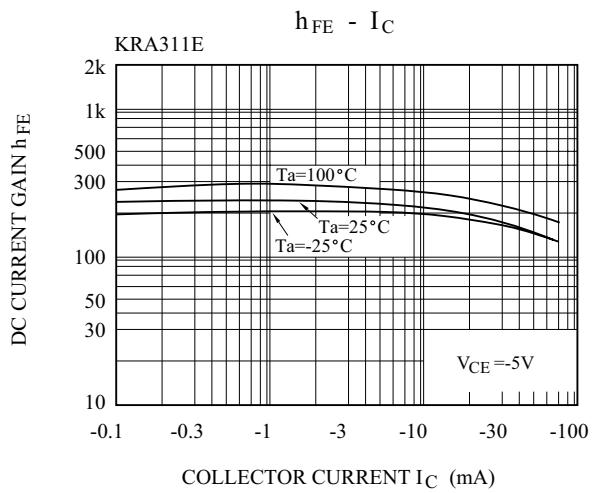
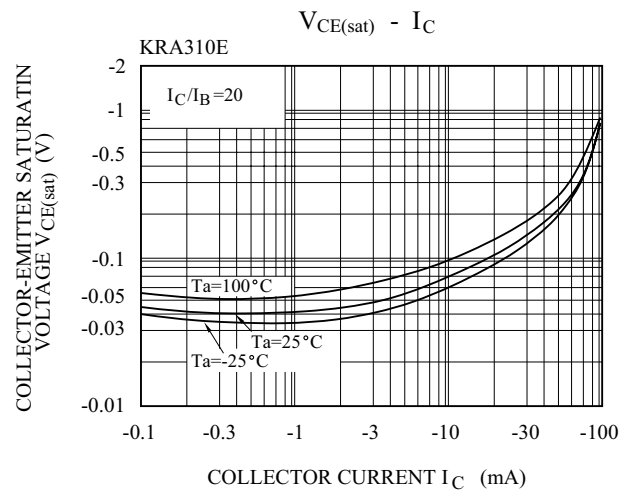
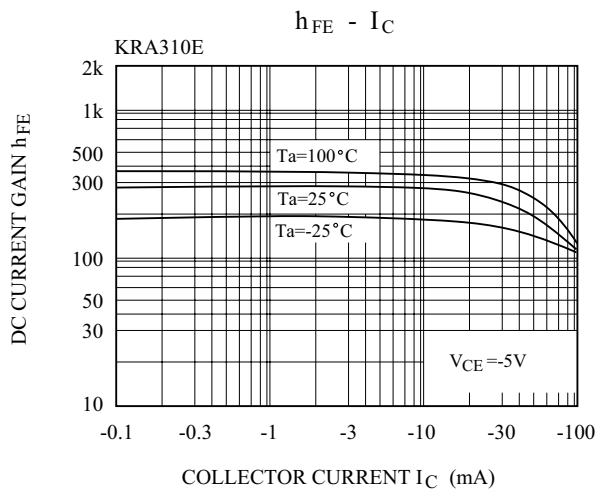


KRA310E~KRA314E

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| CHARACTERISTIC | | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|----------------|--------------|---------|------------------|---|------|-------|------|------|
| Switching Time | Rise Time | KRA310E | t _r | V _O =-5V V _{IN} =-5V R _L =1k Ω | - | 0.2 | - | μS |
| | | KRA311E | | | - | 0.065 | - | |
| | | KRA312E | | | - | 0.4 | - | |
| | | KRA313E | | | - | 0.1 | - | |
| | | KRA314E | | | - | 0.15 | - | |
| | Storage Time | KRA310E | t _{stg} | | - | 2.0 | - | |
| | | KRA311E | | | - | 1.7 | - | |
| | | KRA312E | | | - | 3.0 | - | |
| | | KRA313E | | | - | 2.0 | - | |
| | | KRA314E | | | - | 1.5 | - | |
| | Fall Time | KRA310E | t _f | | - | 0.3 | - | |
| | | KRA311E | | | - | 0.3 | - | |
| | | KRA312E | | | - | 1.7 | - | |
| | | KRA313E | | | - | 0.8 | - | |
| | | KRA314E | | | - | 1.5 | - | |

KRA310E~314E



KRA310E~314E

