



## UG9K

## DUAL TRANSISTOR

### COMPOUND TRANSISTORS

### UG9K

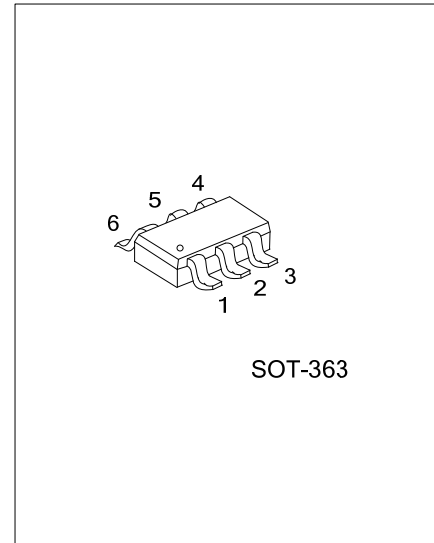
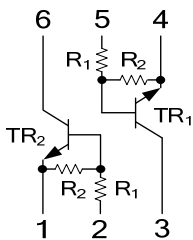
#### DESCRIPTION

As a compound transistor with resistor, the UTC **UG9K** is for switching application.

#### FEATURES

- \* Silicon epitaxial type
- \* The internal two transistor elements are independent.

#### SYMBOL

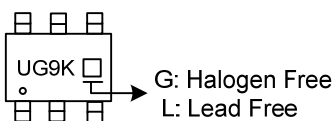


#### ORDERING INFORMATION

| Ordering Number |              | Package | Pin Assignment |    |    |    |    |    | Packing   |
|-----------------|--------------|---------|----------------|----|----|----|----|----|-----------|
| Lead Free       | Halogen Free |         | 1              | 2  | 3  | 4  | 5  | 6  |           |
| UG9KL-AL6-R     | UG9KG-AL6-R  | SOT-363 | E1             | B1 | C2 | E2 | B2 | C1 | Tape Reel |

|  |   |
|--|---|
| <p>UG9KL-AL6-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Lead Free</li> </ul> | <ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AL6: SOT-363</li> <li>(3) G: Halogen Free, L: Lead Free</li> </ul> |
|--|---|

#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

| PARAMETER                   | SYMBOL    | RATINGS    | UNIT             |
|-----------------------------|-----------|------------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | 50         | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | 50         | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | 10         | V                |
| Collector Current           | $I_C$     | 100        | mA               |
| Collector Power Dissipation | $P_C$     | 150        | mW               |
| Junction Temperature        | $T_J$     | +150       | $^\circ\text{C}$ |
| Storage Temperature         | $T_{STG}$ | -55 ~ +150 | $^\circ\text{C}$ |

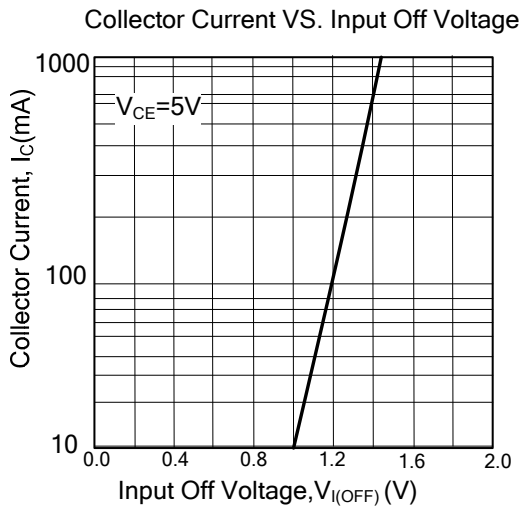
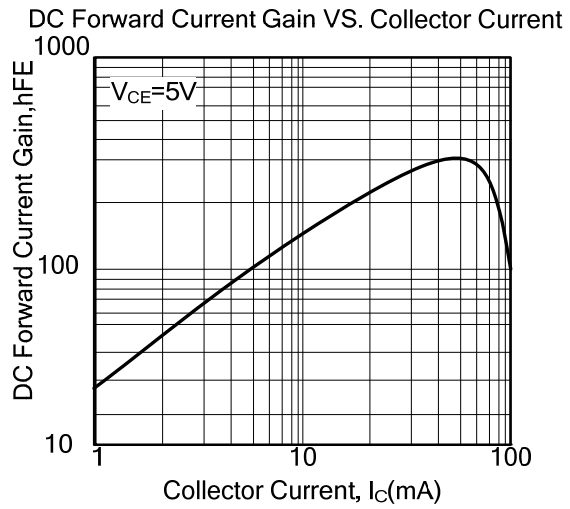
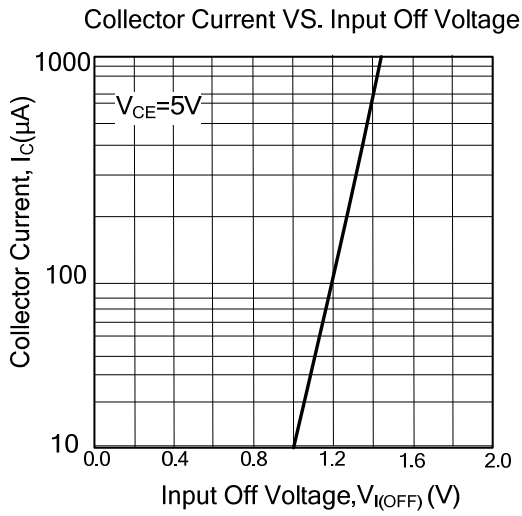
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                        | MIN | TYP | MAX | UNIT          |
|--------------------------------------|---------------|--|-----|-----|-----|---------------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C=100\mu\text{A}$                   | 50  |     |     | V             |
| Input Voltage                        | $V_{IN(ON)}$  | $V_{CE}=0.2\text{V}, I_C=5\text{mA}$   |     | 1.5 | 3.0 | V             |
|                                      | $V_{IN(OFF)}$ | $V_{CE}=5\text{V}, I_C=100\mu\text{A}$ | 0.8 | 1.1 |     |               |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C/I_B=10\text{mA}/0.5\text{mA}$     |     | 0.1 | 0.3 | V             |
| Collector Cutoff Current             | $I_{CBO}$     | $V_{CB}=50\text{V}$                    |     |     | 0.1 | $\mu\text{A}$ |
| DC Current Transfer Ratio            | $h_{FE}$      | $V_{CE}=5\text{V}, I_C=10\text{mA}$    | 50  |     |     |               |
| Transition Frequency                 | $f_T$         | $V_{CE}=6, I_E=-10\text{mA}$           |     | 200 |     | MHz           |
| Input Resistance                     | $R_1$         |  | 7   | 10  | 13  | k $\Omega$    |
| Resistor Ratio                       | $R_2/R_1$     |  | 0.9 | 1   | 0.1 |               |

■ TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.