



UEC1001

LINEAR INTEGRATED CIRCUIT

AIR FLOW INDUCTION SWITCH FOR ELECTRONIC CIGARETTES CONTROL

■ DESCRIPTION

The UTC **UEC1001** is a highly integrated and high performance air flow induction IC for electronic cigarettes control. Only one MCU and one capacitor are needed as the peripheral components, the system cost is very low.

The functional block of the circuit is composed of Reference BG, Current bias I Bias, Oscillator OSC, Digital logic control circuit.

■ FEATURES

- * System Clock Oscillator
- * Ultra Low Static Current (<math><6\mu A</math>)
- * Output Trigger Mode
- * Typical 8KV HBM ESD

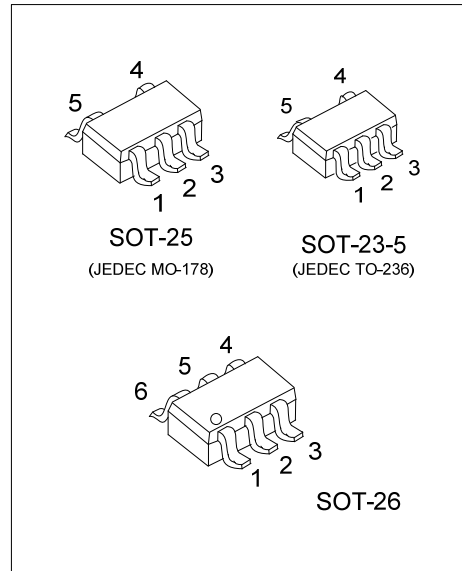
■ ORDERING INFORMATION

| Ordering Number | | Package | Packing |
|-----------------|----------------|----------|-----------|
| Lead Free | Halogen Free | | |
| UEC1001L-AE5-R | UEC1001G-AE5-R | SOT-23-5 | Tape Reel |
| UEC1001L-AF5-R | UEC1001G-AF5-R | SOT-25 | Tape Reel |
| UEC1001L-AG6-R | UEC1001G-AG6-R | SOT-26 | Tape Reel |

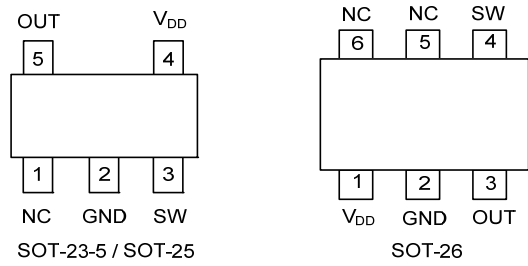
| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>UEC1001G-AE5-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package | <ul style="list-style-type: none"> (1) R: Tape Reel (2) AE5: SOT-23-5, AF5: SOT-25, AG6: SOT-26 (3) G: Halogen Free and Lead Free, L: Lead Free |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

■ MARKING

| SOT-23-5 / SOT-25 | SOT-26 |
|-------------------|--------|
| | |



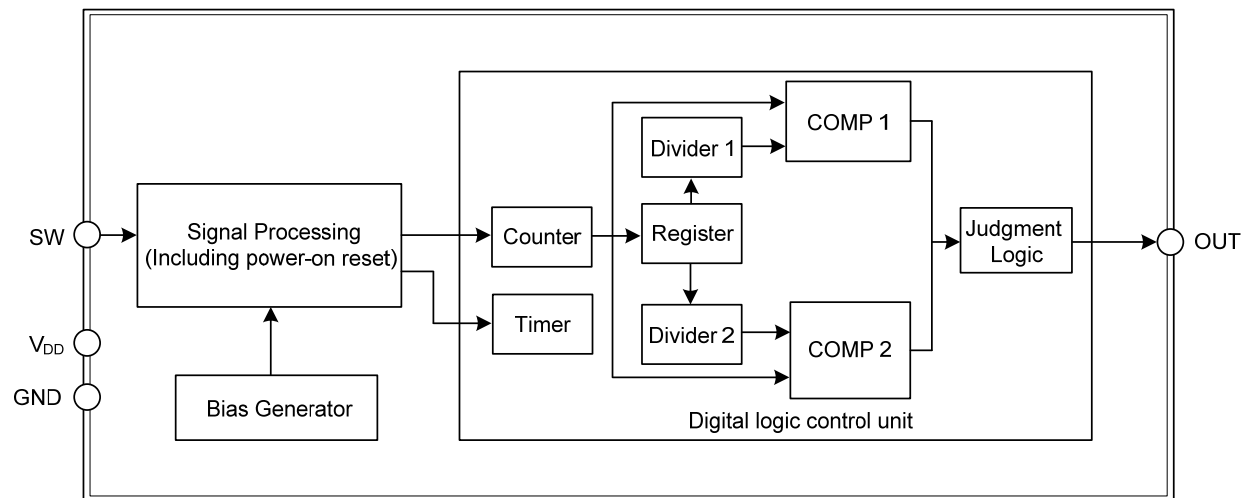
■ PIN CONFIGURATION



■ PIN DESCRIPTION

| PIN NO. | | PIN NAME | DESCRIPTION |
|--------------------|--------|-----------------|--------------------------|
| SOT-23-5 SOT-25 | SOT-26 | | |
| 1 | 5, 6 | NC | No connect |
| 2 | 2 | GND | Ground |
| 3 | 4 | SW | Signal input from sensor |
| 4 | 1 | V _{DD} | Power supply |
| 5 | 3 | OUT | Drive MCU |

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---------------------------|-----------|-----------|--------------------|
| Supply Voltage | V_{DD} | 2.5 ~ 4.5 | V |
| Sampling Terminal Voltage | TSW | 600 | mV |
| Operating Temperature | T_{OPR} | -20 ~ +75 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -40 ~ +75 | $^{\circ}\text{C}$ |

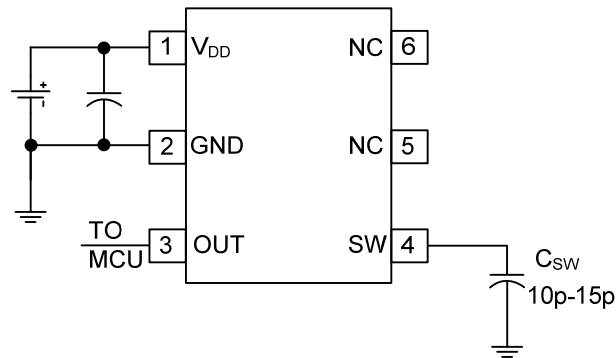
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, $V_{DD}=3.7\text{V}$, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|------------------------------------------------------|---------------|--------------------------------|-----|-----|-----|---------------|
| Supply Voltage | V_{DD} | | 2.5 | 3.7 | 4.2 | V |
| Quiescent Current | I_Q | | | 3.7 | 6 | μA |
| Output Voltage | V_{OUT} | Smoking Status | | 3.7 | | V |
| Smoking Response Time | T | | | 46 | | ms |
| Delay Protection Time | T_{OP_MAX} | | | 10 | | s |
| Out Load Current | I_{OUT} | OUT="H", $V_{OUT}=3.4\text{V}$ | | 5 | | mA |
| | | OUT="L", $V_{OUT}=0.1\text{V}$ | | -5 | | |
| Capacitance Detection Change Switch Threshold (Note) | | | | 1.6 | | % |

Note: Guaranteed by design.

■ TYPICAL APPLICATION CIRCUIT



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