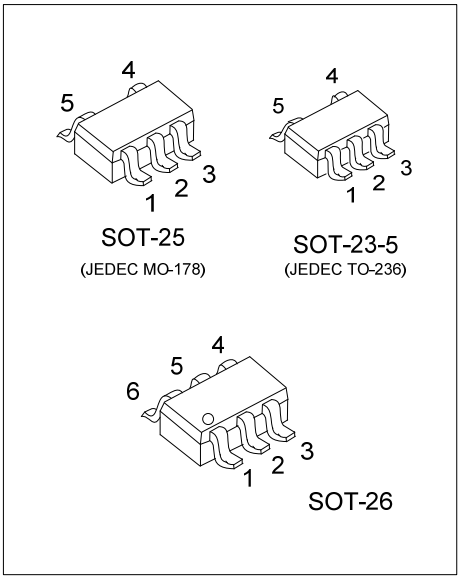
UEC1001

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

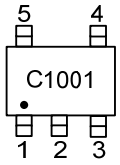
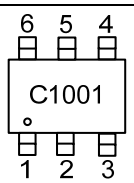
* System Clock Oscillator
* Ultra Low Static Current (<6μA)
* Output Trigger Mode
* Typical 8KV HBM ESD

■ ORDERING INFORMATION

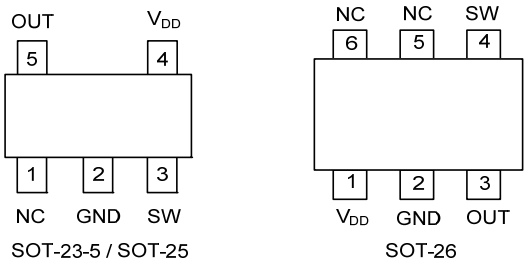
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UEC1001L-AE5-R	UEC1001G-AE5-R	SOT-23-5	Tape Reel
UEC1001L-AF5-R	UEC1001G-AF5-R	SOT-25	Tape Reel
UEC1001L-AG6-R	UEC1001G-AG6-R	SOT-26	Tape Reel

UEC1001G-AE5-R (1)Packing Type (2)Package Type (3)Green Package	(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
	

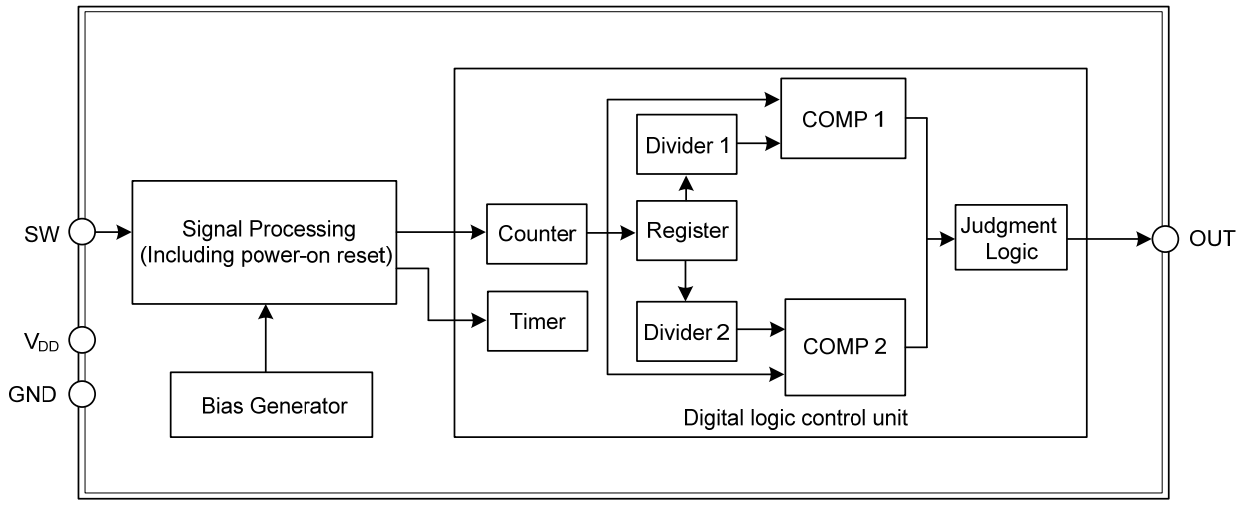
■ PIN CONFIGURATION



■ 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°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	°C
Storage Temperature	T_{STG}	-40 ~ +75	°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°C, V_{DD}=3.7V, 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}=3.4V		5		mA
		OUT="L", V_{OUT}=0.1V		-5		
Capacitance Detection Change Switch Threshold (Note)				1.6		%

Note: Guaranteed by design.

■ TYPICAL APPLICATION CIRCUIT