



UEC1003

Preliminary

LINEAR INTEGRATED CIRCUIT

AIR FLOW INDUCTION SWITCH FOR ELECTRONIC CONTROL

DESCRIPTION

The UTC **UEC1003** is a dedicated electronic smoke flow switch chip, integrated MOSFET chip, airflow induction circuit, over-current protection circuit, anti-interference protection circuit. Less peripheral components, only 1 capacitor and 1 airflow switch.

FEATURES

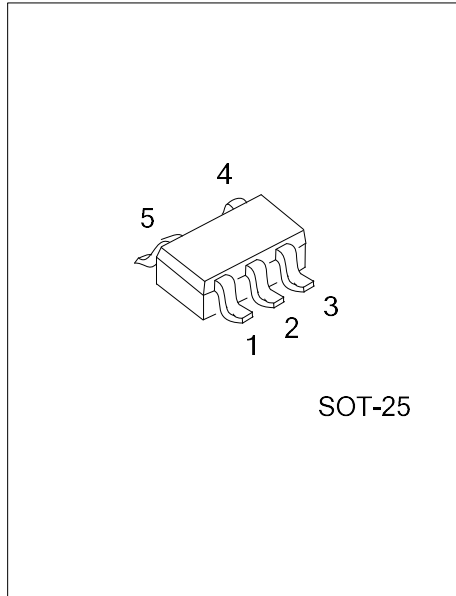
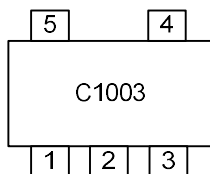
- * Ultra low static current (< 5μA)
- * Integrated MOSFET
- * Build in multi-protection: Under Voltage Lockout, Load Resistance Short, Over Current, Over Temperature
- * LED display function: Imitate smoking state, immobile protection state corresponds to different LED mode
- * Built-in high-precision algorithm unit, can automatically adjust to the current environment

ORDERING INFORMATION

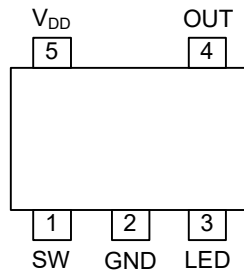
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UEC1003L-AF5-R	UEC1003G-AF5-R	SOT-25	Tape Reel

<p>UEC1003G-AF5-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) AF5: SOT-25 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



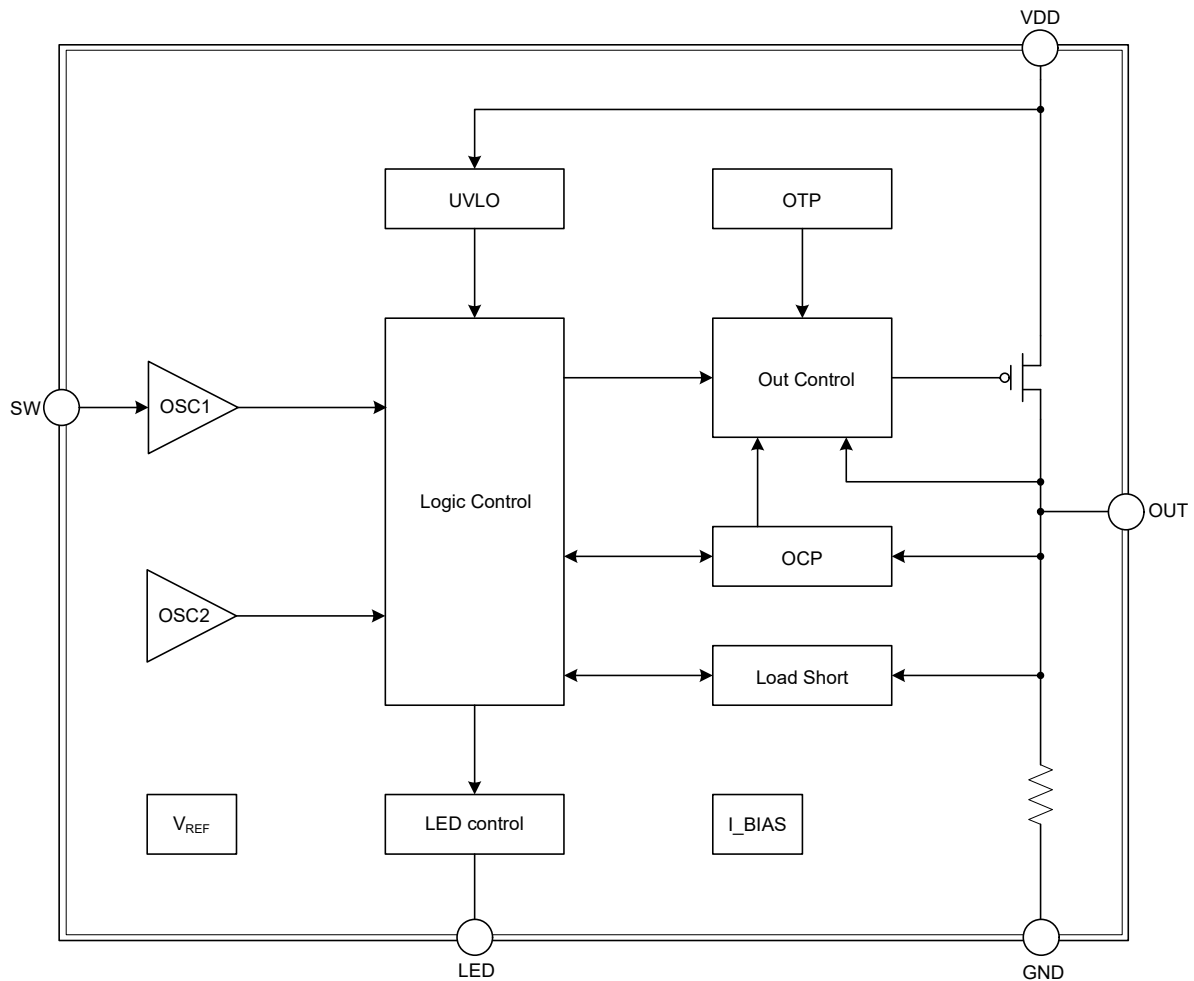
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	SW	Signal input from sensor
2	GND	Ground
3	LED	Connect LED
4	OUT	Output
5	V _{DD}	Power supply

■ BLOCK DIAGRAM



■ **ABSOLUTE MAXIMUM RATING**

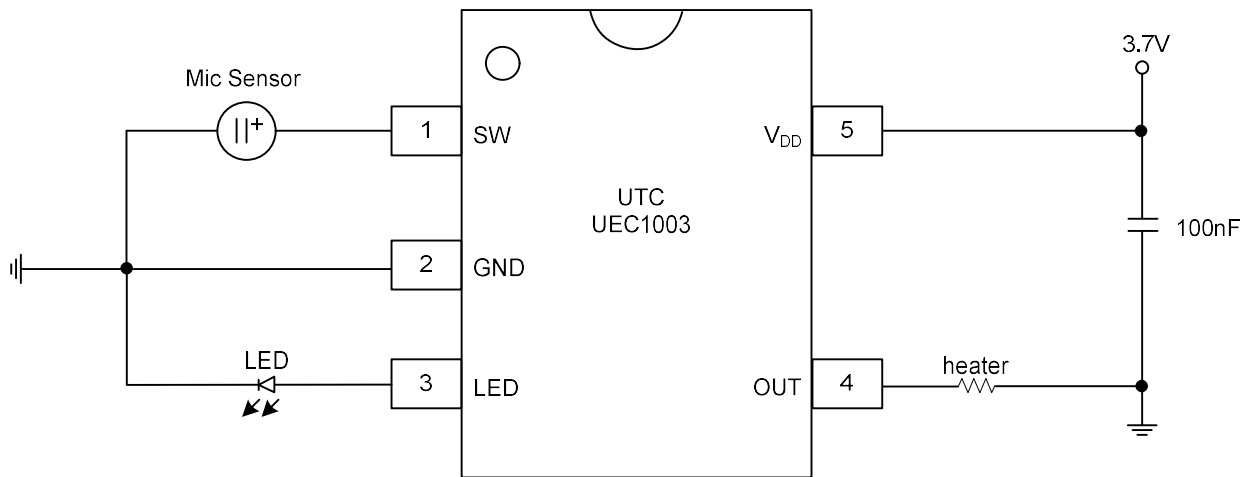
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{DD}	0 ~5	V
Operating Temperature	T _{OPR}	-20 ~ +75	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

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**

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V _{DD}		3.2	3.7	4.2	V
V _{DD} Under Voltage Lockout	V _{UVLO}			3.2		V
V _{DD} Quiescent Current	I _Q	V _{DD} =3.7V		3	5	uA
Load Resistance for OCP	R _L			1		Ohm
Load Resistance for normal work	R _{LOAD}		1.6			Ohm
Over Current Protection	I _{OCP}	V _{DD} =3.7V		2.5		A
Minimum Duty Ratio	D _{MIN}	V _{DD} =4.2V		90		%
Internal Switch On Resistance	R _{DS_ON}	I=1.5A		150		mOhm
Maximum Operation Time	T _{OP_MAX}			5		S
LED Current	I _{LED}			4.8		mA
Power-on Self-check Time	T _{POR}			1.5		S

■ TYPICAL APPLICATION CIRCUIT



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