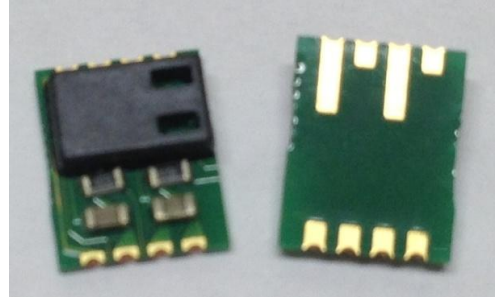


온습도 센서 (HT-01SV)

HT-01SV는 정전용량 방식의 습도센서와 밴드갭 온도센서의 일체형 센서로서 디지털 측정값을 전압으로 변환하여 출력하도록 구성 되어져 있고, 개별적으로 모든 센서가 보정이 되어 출하되는 뛰어난 성능의 온습도 겸용 센서입니다.

1. Features

- 상대습도 및 온도 측정 센서
- 전압 출력(관련 수식 참조)
- 뛰어난 장기 안정성
- 저전력 소모 (60 μ A)
- 작은 사이즈 (SMD type)



2. Application

- HVAC, 공장자동화, 데이터로깅, 가전제품, 자동차, 기상장비, 가·제습기, 의료분야 등

3. Specifications

항목		상대습도			온도		
		Min	Typ	Max	Min	Typ	Max
Resolution		14 bit			14 bit		
Operating Range		0		100%RH	-40 °C		120 °C
Accuracy	Typical		$\pm 2.5\%RH$			$\pm 0.5\text{ }^{\circ}C$	
	Maximal	Fig. 1 참조			Fig. 2 참조		
Hysteresis		< $\pm 1.5\%RH$			n/a		
Response Time		10 sec			15 sec		25 sec

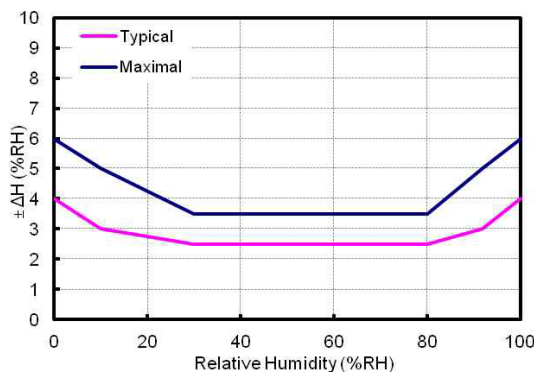


Fig. 1 Humidity-accuracy at 25°C

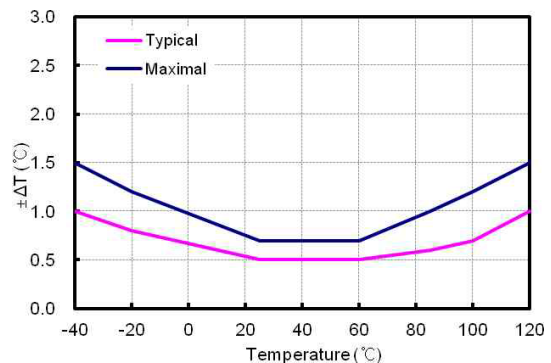
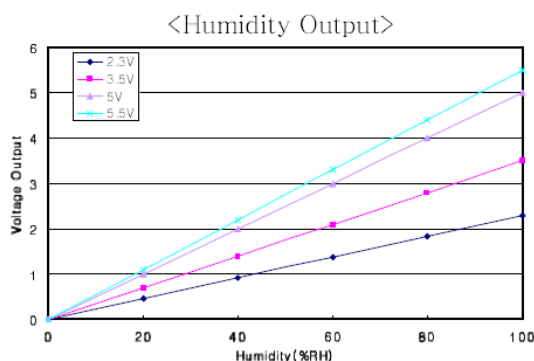


Fig. 2 Temperature-accuracy

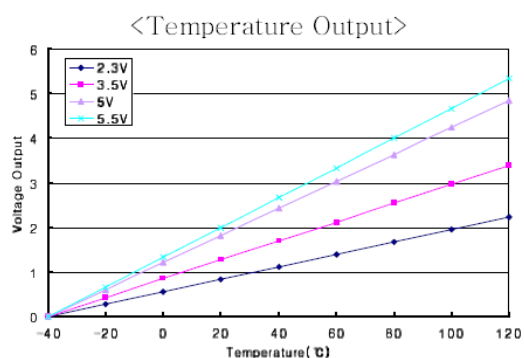
4. Signal Output



Equations

$$V_{out} = (V_{in}/100) \times \%RH$$

$$\%RH = V_{out}/(V_{in}/100)$$

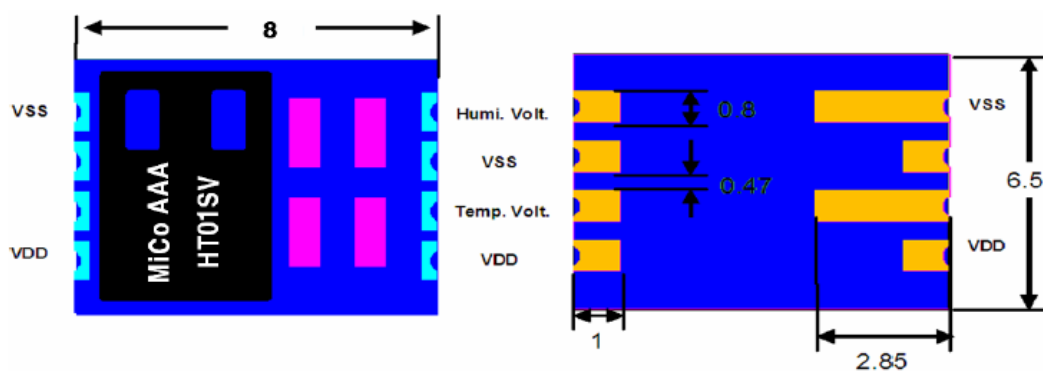


Equations

$$V_{out} = (V_{in}/165) \times (°C + 40)$$

$$°C = V_{out}/(V_{in}/165) - 40$$

5. Dimension & Pin assignment



Name	Pin Function	Name	Pin Function
VSS	GROUND	Humi. Volt	RH Voltage Output
NC		VSS	GROUND
NC		Temp. Volt	Temp Voltage Output
VDD	DC Power	VDD	DC Power

** VDD : 2.3~5.5V