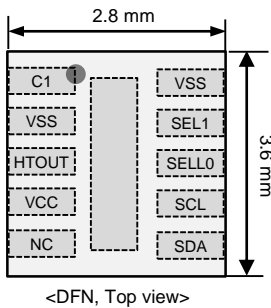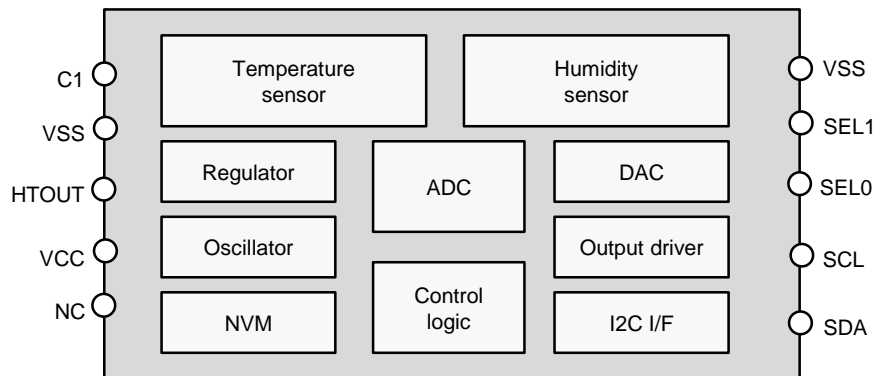# MXH1100 humidity sensor IC

Haechitech

The MXH1100 is a state of the art temperature and relative humidity sensor utilized proven techniques for measuring humidity using polymer dielectric film along with CMOS mixed signal integrated circuits. It provides fully calibrated digital output(I2C, PWM, PDM) and analog output as well. In particular, its analog output allows for easy integration without the need for additional calibration/component. The resolution can be changed by command (8/12bit up to 12/14bit for RH/T). Every sensor is individually calibrated and tested and the lot identification is printed on the sensor

Key Features

2.8 mm

C1		VSS
VSS		SEL1
HTOUT		SELL0
VCC		SCL
NC		SDA

3.6 mm

<DFN, Top view>

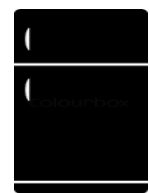|	**MXH1100**
Function	Humidity / Temperature (Linear temperature compensation)
Package	2.8mm x 3.6mm x 0.8mm 10-pin DFN
VDD	4.5V ~ 5.25V
Resolution	12-bit/8-bit for humidity 14-bit/12-bit for temperature
Humidity accuracy	Typ. ±2%, Max. ±3%
Response time	Max. 10 seconds (controllable in PDM & PWM)
Current consumption	Typ. 300uA @ analog mode
Analog output driving load	Max. 10uF Min. 1Kohm
Repeatability	±0.1 %RH
Hysteresis	±1.0 %RH
Output	I2C / PWM / PDM / Analog Voltage selectable by SEL[1:0]
Others	Passed 8585 test (endurance test under 85°C, 85% environment)

Block Diagram

C1, VSS, HTOUT, VCC, NC — Temperature sensor — Humidity sensor — Regulator — ADC — DAC — Oscillator — Output driver — NVM — Control logic — I2C I/F — VSS, SEL1, SEL0, SCL, SDA

Applications

Air conditioner

Washing machine

Refrigerator