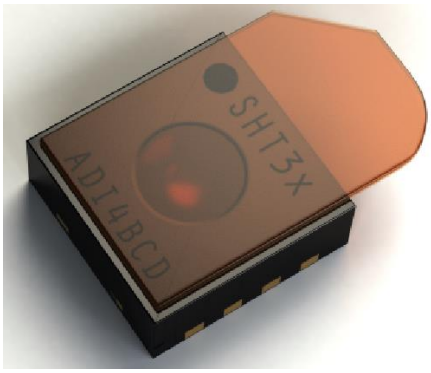
Datasheet Protective Cover Option

For SHT3x Humidity and Temperature Sensors

- Protects the sensor against pollution during assembly processes
- Enables cost-effective brush-over and spray-over conformal coating procedures
- Withstands multiple standard reflow cycles
- Removable with tweezers at end-of-line
- Delivered in T&R packaging



Product Summary

The SHT3x protective cover is a polyimide foil, dedicated to protect the sensor opening from pollution. The sensor is delivered with the protective cover attached such that the sensor opening is completely covered and sealed. This enables cost-effective brush-over and spray-over application procedures of conformal coating material. The protective cover can be easily removed with tweezers at the end of the assembly process to allow for proper sensor operation.

Datasheet: Intention of Use

This datasheet is meant to provide all relevant specifications for the additional protective cover option of the RH&T-sensors of type SHT3x. All SHT3x products coming with the protective cover option are listed in **Table 1**, together with their respective order number. **Any further information about sensor performance, communication protocols etc. are to be found in the respective main datasheets, only.**

1 General information

The SHT3x protective cover is an optional polyimide foil, directly attached to the top surface of the sensor. It covers the complete sensing area of the SHT3x and thus acts as a reliable shield against pollution during SMT assembly of the sensor and subsequent processes such as conformal coating or potting. The protective cover is designed to withstand multiple reflow cycles. After assembly and for proper operation of the sensor the cover tape must be removed.

The cover features a flap that extends over the outside dimension of the sensor package on one side. This flap is designed to allow the cover to be peeled off easily by using tweezers. After peel-off the sensor will operate regularly as specified in the respective datasheet.

All typical application procedures such as brushing, spraying or potting can be used as long as the protective cover is attached. The cover will effectively protect the sensor opening from direct exposure to these coatings and other possible pollutants during production process. However, the cover does not protect sensor contamination by volatile chemicals resulting from outgassing or curing of the conformal coating. Sensirion recommends to cure conformal coatings according to supplier specifications (temperature und timing) and to provide for increased ventilation. Further extended curing times will additionally reduce the risk of contamination. More details on contamination and a list of suitable conformal coatings can be found in the document “SHTxx Handling Instructions”, downloadable from our website.

As the cover flap extends over one side of the sensor, please keep in mind that the underneath area of the PCB will not be coated. The relevant dimensions are sketched in **Figure 1** which will help proper PCB design. The two metallic contacts which are in the side wall of the sensor and lay under the protective cover do not need conformal coating, as they are electrically grounded.

Handling and storage recommendations in the "SHTxx handling instructions" document also apply to sensors with the protective cover option.

After reflow soldering the sensor will need a reconditioning procedure if immediate functional testing is desired. Details on the reconditioning steps are listed in "SHTxx handling instructions".

2 Ordering Information

The SHT3x protective cover can be ordered in tape and reel packaging in different reel sizes given in Table 1. The reels are delivered in sealed ESD bags.

Name	Quantity	Order Number
SHT30-DIS-P2.5kS	2'500	1-101461-01
SHT30-DIS-P10kS	10'000	1-101326-01
SHT31-DIS-P2.5kS	2'500	1-101458-01
SHT31-DIS-P10kS	10'000	1-101472-01
SHT30-LSS-P2.5kS	2'500	1-101468-01
SHT30-LSS-P10kS	10'000	1-101342-01

Table 1 SHT3x protective cover ordering options.

3 Technical Drawing

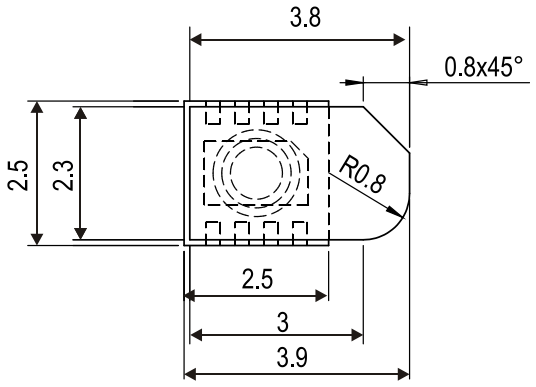


Figure 1 Dimensional drawing of SHT3x protective cover sensor package. Pin 1 is indicated through the cut corner of the flap.

4 Land Pattern

For recommended metal land pattern please refer to the respective SHT3x data sheet. In case conformal coating is used, it is not recommended to place components or open metal surfaces on the PCB underneath the extension flap of the protective cover because this area will not be coated properly.

5 Shipping Package

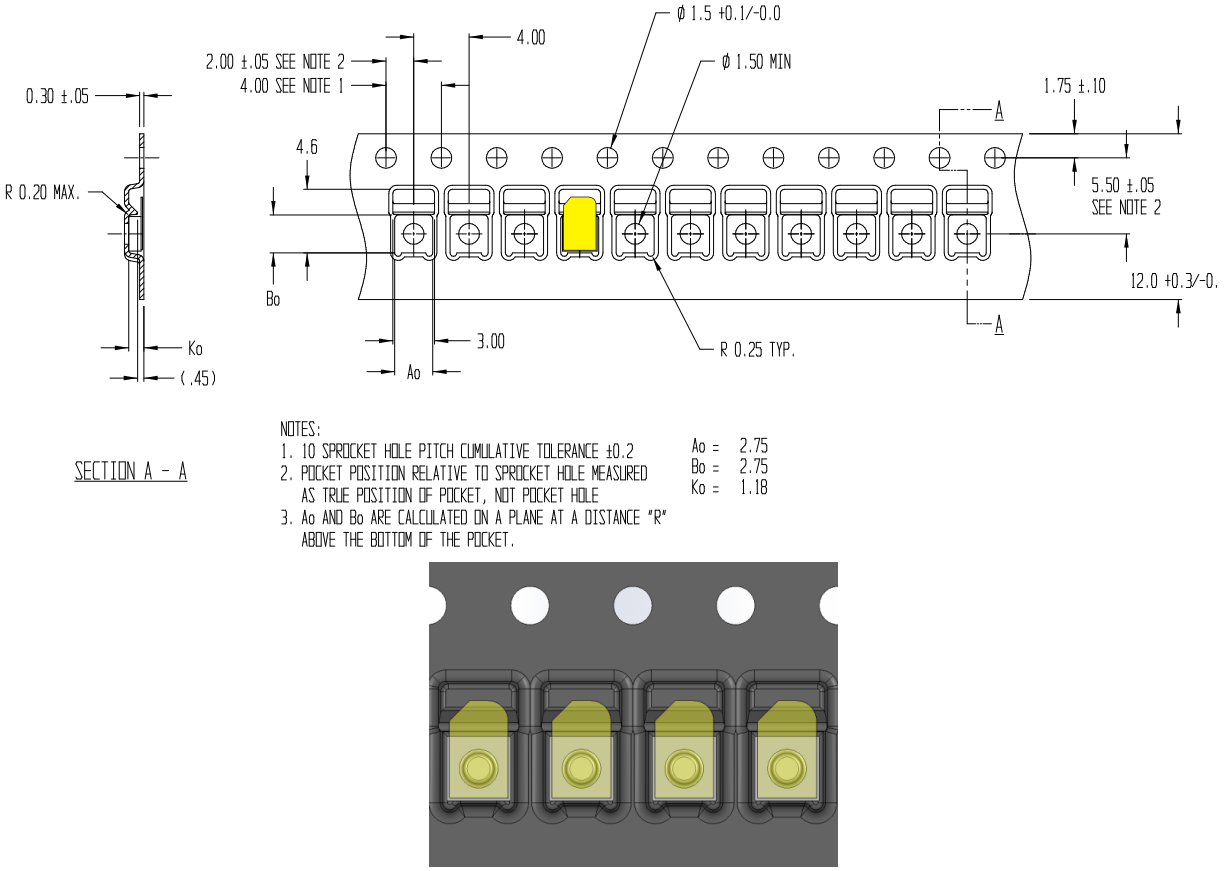


Figure 2 Technical drawing of the packaging tape with sensor orientation in tape. Header tape is to the right and trailer tape to the left on this drawing. Dimensions are given in millimeters.

6 Quality

6.1 Material Contents

The device is fully RoHS and WEEE compliant, e.g. free of Pb, Cd, and Hg.

Revision History

Date	Version	Page(s)	Changes
3. July 2015	1	all	Initial release
February 2016	2	all	Update on use and applicability of protective cover; New available products
May 2019	3	2	Introduction of new reel sizes

Important Notices

Warning, Personal Injury

Do not use this product as safety or emergency stop devices or in any other application where failure of the product could result in personal injury. Do not use this product for applications other than its intended and authorized use. Before installing, handling, using or servicing this product, please consult the data sheet and application notes. Failure to comply with these instructions could result in death or serious injury.

If the Buyer shall purchase or use SENSIRION products for any unintended or unauthorized application, Buyer shall defend, indemnify and hold harmless SENSIRION and its officers, employees, subsidiaries, affiliates and distributors against all claims, costs, damages and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if SENSIRION shall be allegedly negligent with respect to the design or the manufacture of the product.

ESD Precautions

The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation, take customary and statutory ESD precautions when handling this product.
See application note "ESD, Latchup and EMC" for more information.

Warranty

SENSIRION warrants solely to the original purchaser of this product for a period of 12 months (one year) from the date of delivery that this product shall be of the quality, material and workmanship defined in SENSIRION's published specifications of the product. Within such period, if proven to be defective, SENSIRION shall repair and/or replace this product, in SENSIRION's discretion, free of charge to the Buyer, provided that:

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- such defects shall be found, to SENSIRION's reasonable satisfaction, to have arisen from SENSIRION's faulty design, material, or workmanship;
- the defective product shall be returned to SENSIRION's factory at the Buyer's expense; and
- the warranty period for any repaired or replaced product shall be limited to the unexpired portion of the original period.

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