Innovative Sensor Technology physical. chemical. biological.	ECR - Engineering Change Rec ECN - Engineering Change No	A19-017	
ECN Classification:	Class II (customer notification only, no approval required)		
Project:	SMD with Soft Termination Release by □ Custom		☐ Customer ☒ IST:
Division:	R&D	Date / Signature see page 2	
Product:	See product list in attachment		
Customer:	all Name (in block letters)/ Pc		ck letters)/ Position
Abstract of change:	Change of wrap around contacts (end termination) for surface mount devices		
Attachment:	☑ Datasheet ☑ Product List		

Reason(s) for change:

The scope of the change is a technology upgrade to end termination according to the state-of-the-art technology and make the sensor more robust in the customer's application.

The aim of the technology upgrade is to improve the following parameters:

- Improved process reliability at soldering
- Better long-term stability in thermal cycling and thermal shock conditions
- Improved dimension reliability

There are no changes to the sensor characteristics or to the external dimensions (sensor length, width, height).

Change details:

For the internal approval IST performed following tests:

Test procedure	Details:	Comment:
Long-term stability	Aging and Thermal cycling	1000 h duration, passed
Solderability	J_STD-002E Test A + A1	passed
Dewetting	J_STD-002E Test A + A1	passed
Reflow Soldering & Profile		recommended profile in datasheet
Temperature Cycling & Shear Test	IEC 62137-1-2	ongoing, internal tests passed

The new wrap around contact (WAC) is based on a metalized polymer paste. To prevent the dissolution of the base metallization in solder an additional galvanic plating nickel barrier layer and a tin layer as end termination for easy solderability and prevention of oxidation is plated.

For the new manufacturing process the sensor design was optimized. Both, the passivation glass and the pad were improved in terms of chemical resistance.

The table below gives an overview of all implemented changes and modifications:

Sensor Type:	2P	2ST
Sensor element material	Platinum	Platinum
Substrate type	Ceramic - Al ₂ O ₃	Ceramic - Al ₂ O ₃
Glass passivation	Glass I	Glass II (higher chemical resistance)
Pad composition (sensor level)	Thin film	Thick film
Termination	3-side	5-side
Termination material	Adhesion layer + Au + Sn	Metal polymer paste + Ni + Sn

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Position	Name	Date & Signature
Quality Manager	Walter Zimmermann	17. Nov. 2021 (), 2
Team Leader Technology	Yannick Barb	17. Nov. 2021

Attachment:

Affected Products / Product list:

Mat. No. Old	Mat. Name Old		Mat. Name New	Mat. No. New
100565	P1K0.0805.2P.B	>	P1K0.0805.2ST.B	101865
100596	P1K0.0805.2P.B.S	>	P1K0.0805.2ST.B.S	102023
100597	P0K1.0805.2P.B.S	>	P0K1.0805.2ST.B.S	152446
100612	P0K1.0805.2P.B	>	P0K1.0805.2ST.B	152441
100613	P0K1.0805.2P.A	>	P0K1.0805.2ST.A	150043
100614	P0K1.0805.2P.A.S	>	P0K1.0805.2ST.A.S	150044
100617	P0K5.0805.2P.A	>	P0K5.0805.2ST.A	150045
100618	P0K5.0805.2P.B	>	P0K5.0805.2ST.B	150046
100619	P0K5.0805.2P.B.S	>	P0K5.0805.2ST.B.S	150049
100620	P1K0.0805.2P.A	>	P1K0.0805.2ST.A	150028
100621	P1K0.0805.2P.A.S	>	P1K0.0805.2ST.A.S	150029
100635	P0K1.0805.2P.C	>	P0K1.0805.2ST.C	152445
100659	P1K0.0805.2P.C	>	P1K0.0805.2ST.C	102020
100667	P0K5.0805.2P.C	>	P0K5.0805.2ST.C	150047
100965	P1K0.0805.2P.A.S	>	P1K0.0805.2ST.A.S	150037
100966	P1K0.0805.2P.B.S	>	P1K0.0805.2ST.B.S	150038
100986	P0K1.0805.2P.B.S	>	P0K1.0805.2ST.B.S	150035
101020	P0K1.0805.2P.A.S	>	P0K1.0805.2ST.A.S	150034
101063	P1K0.0805.2P.K	>		please contact IST
101068	P0K1.0805.2P.C.S	>	P0K1.0805.2ST.C.S	150036
101105	P1K0.0805.2P.C.S	>	P1K0.0805.2ST.C.S	150039
101229	P1K0.0805.2P.C.S	>	P1K0.0805.2ST.C.S	102024
101328	P1K0.0805.2P.A.S	>		please contact IST
101452	P1K0.0805.2P.K.S	>		please contact IST
101572	P0K1.0805.2P.A.S	>		please contact IST
101709	P0K5.0805.2P.A.S	>	P0K5.0805.2ST.A.S	150040
102058	P1K0.0805.2P.A.S	>		please contact IST
150023	P0K1.0805.2P.A.S	>		please contact IST
152040	P0K1.0805.2P.B.S	>		please contact IST
152050	P0K1.0805.2P.A.S	>		please contact IST
152054	P1K0.0805.2P.B.S	>		please contact IST
152055	P1K0.0805.2P.A.S	>		please contact IST

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November 2021

Important Customer Information: Adaptation of SMD sensor terminations and contacts

Dear Customers and Business Partners,

0805 SMD Type (Surface Mount Devices) RTD Sensor Component Products made by our company have been upgraded <u>to provide better availability</u> as <u>well as better reliability</u> through improved soldering terminations (soldering pads on the chip).

Technically and functionally, the revision of our product portfolio has **no known effects** on the applications, which includes sensor characteristics and dimensions. The new versions are fully exchangeable with the former products and designs. For a detailed description please refer to the provided **ECN A19-017**.

We encourage you to update your product now with the new part numbers and please do not hesitate to contact us for **free approval samples**.

The last possible delivery date for the discontinued articles is June 30st, 2022 (delivery date from IST AG). Any blanket orders must be revised or switched to the corresponding alternatives by this date. We accept repeated orders for the discontinued articles until March 31st, 2022 (received by IST), taking into account the respective delivery times and the last possible delivery date.

You received this message because you have purchased corresponding sensor products within the last two years.

If you have any questions, please do not hesitate to contact us.

Best regards,

Alan Ravizza Alan Ravizza

Managing Director USA Division