

physical. chemical. biological.

December 2022

Important Customer Information: Adaptation of SMD sensor terminations and contacts

Dear Customers and Business Partners,

1206 SMD Type (Surface Mount Devices) RTD Sensor Component Products made by our company have been upgraded to provide better availability as well as better reliability 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. <u>The new versions are fully exchangeable with the former products and designs</u>. For a detailed description please refer to the provided **ECN A22-079**.

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, 2023 (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, 2023 (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 three years.

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

Best regards,

Alan Ravizza
Alan Ravizza
CSO Chief Sales Officer

Innovative Sensor Technology physical. chemical. biological.	ECR - Engineering Change Rec ECN - Engineering Change No	A22-079	
ECN Classification:	Class II (customer notification only, no approval required)		
Project:	SMD with soft termination	Release by □ Customer 図 IST:	
Division:	R&D	in attachment Date / Signature see page 2 Name (in block letters)/ Position	
Product:	See product list in attachment		
Customer:	all		
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 leading to increased robustness of the sensor in 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 internal approval, IST AG performed the 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

Position	Name	Date & Signature
Quality Manager	Walter Zimmermann	05. Dec. 2022
Team Leader Technology	Yannick Barb	05. Dec. 2022

Attachment:

Affected Products / Product list:

Part No. Old	Part Name Old		Part Name New	Part No. New
100583	P0K1.1206.2P.A.S	>	P0K1.1206.2ST.A.S	153481
100584	P0K1.1206.2P.B.S	>	P0K1.1206.2ST.B.S	153482
100585	P1K0.1206.2P.A.S	>	P1K0.1206.2ST.A.S	153484
100586	P1K0.1206.2P.B.S	>	P1K0.1206.2ST.B.S	153485
100591	P0K5.1206.2P.B.S	>	P0K5.1206.2ST.B.S	153496
100598	P0K5.1206.2P.B	>	P0K5.1206.2ST.B	153297
100601	P0K1.1206.2P.A	>	P0K1.1206.2ST.A	153288
100602	P0K1.1206.2P.B	>	P0K1.1206.2ST.B	153289
100605	P1K0.1206.2P.B	>	P1K0.1206.2ST.B	153293
100606	P1K0.1206.2P.A	>	P1K0.1206.2ST.A	153291
100610	P0K5.1206.2P.A	>	P0K5.1206.2ST.A	153296
100611	P0K5.1206.2P.A.S	>	P0K5.1206.2ST.A.S	153495
100625	P1K0.1206.2P.C	>	P1K0.1206.2ST.C	153294
100629	P0K1.1206.2P.C	>	P0K1.1206.2ST.C	153290
100669	P0K5.1206.2P.C	>	P0K5.1206.2ST.C	153301
100773	P10K.1206.2P.B	>		please contact IST
100774	P10K.1206.2P.C	>		please contact IST
100957	P1K0.1206.2P.A.S	>	P1K0.1206.2ST.A.S	153470
100960	P1K0.1206.2P.B.S	>	P1K0.1206.2ST.B.S	153472
100964	P0K1.1206.2P.A.S	>	P0K1.1206.2ST.A.S	153303
100985	P0K1.1206.2P.B.S	>	P0K1.1206.2ST.B.S	153304
101013	P0K1.1206.2P.D	>	P0K1.1206.2ST.C	153290
101024	P0K1.1206.2P.D.S	>	P0K1.1206.2ST.C.S	153305
101464	P10K.1206.2P.B.S	>		please contact IST
152052	P0K1.1206.2P.B.S	>	P0K1.1206.2ST.B.S	153304
152053	P0K1.1206.2P.A.S	>	P0K1.1206.2ST.A.S	153303
152056	P1K0.1206.2P.B.S	>	P1K0.1206.2ST.B.S	153472
152057	P1K0.1206.2P.A.S	>	P1K0.1206.2ST.A.S	153470
152490	NB4K7.1206.2P.K	>		please contact IST
152731	ND234.1206.2P.K.S	>		please contact IST
152839	P1K0.1206.2P.K.S	>		please contact IST
153727	ND234.1206.2P.K	>		please contact IST