

	APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Component Title: RESISTANCE TEMPERATURE DETECTOR THIN FILM PLATINUM SENSOR, PTC, RANGE 100 TO 2000 OHMS AT 0°C, WITH A TEMPERATURE RANGE OF -200°C TO +200°C (without wires) Executive Member: ESA Date: 18/01/2024	Page 1 Appl. No. 352C			
Components (including series and families) submitted for Extension of Qualification Approval: 1					
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
4006 015 02 00		100 Ohms			4006 015 01 00 4006 015 03 00 4006 015 04 00 4006 015 05 00 4006 015 06 00
4006 015 08 00		1000 Ohms			4006 015 07 00 4006 015 09 00 4006 015 10 00
Component Manufacturer 2 Innovative Sensor Technology IST AG		Location of Manufacturing Plant(s) 3 Stegrütistrasse 14 9642 Ebnat-Kappel		Date of original qualification approval: 4 Date: 20/02/2018 Certificate Ref No. 352	
ESCC Specifications used for Maintenance of qualification testing: 5 Generic: 4006 Issue: 4 Detail(s): 4006/015 Issue: 5		Deviations to LVT testing and Detail Specification used: 6 No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (supply details in Box 15) Deviation from current Specifications: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details)		Qualification Extension Report reference and date: 7 231220_P0K1_Test_Report 231220_P1K0_Test_Report Dec. 2023	
Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first) 8					
Project Name	Testing Level	LAT	Date code	Quantity Delivered	
PID changes since start of qualification 9 None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: Refer to ANNEX 2			Current PID Verified by: <u>D. Lacombe, ESA</u> 10 Name of Executive Representative Ref No: PID_01 Issue: 6 Date: 18/1/2024 Rev Date: 13/12/2023		
Current Manufacturing facilities surveyed by: <u>A. Pesce, ESA</u> on _____ 11 (Name of Executive Agency) (Date) Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain IST-AUD-2017 Report Reference: _____					



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Component Title: RESISTANCE TEMPERATURE DETECTOR THIN FILM PLATINUM SENSOR, PTC, RANGE 100 TO 2000 OHMS AT 0°C, WITH A TEMPERATURE RANGE OF -200°C TO +200°C (with wire extension)
 Executive Member: ESA Date: 18/01/2024

Components (including series and families) submitted for Extension of Qualification Approval: 1

ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
4006 015				4006015 02 05 0100	equivalent subvariants
				4006015 02 05 1000	equivalent subvariants
				4006015 02 04 0100	equivalent subvariants
				4006015 02 04 1000	equivalent subvariants

Component Manufacturer Innovative Sensor Technology IST AG 2	Location of Manufacturing Plant(s) Stegrütistrasse 14 9642 Ebnat-Kappel 3	Date of original qualification approval: Date: 20/02/2018 4 Certificate Ref No. 352
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ESCC Specifications used for Maintenance of qualification testing: Generic: 4006 Issue: 4 Detail(s): 4006/015 Issue: 5 5	Deviations to LVT testing and Detail Specification used: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (supply details in Box 15) Deviation from current Specifications: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details) 6	Qualification Extension Report reference and date: 231220_Assembly_Test_Report Dec. 2023 7
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Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first) 8

Project Name	Testing Level	LAT	Date code	Quantity Delivered

PID changes since start of qualification 9 None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: Refer to ANNEX 2	Current PID Verified by: <u>D. Lacombe, ESA</u> 10 Name of Executive Representative Ref No: PID_02 Issue: 2 Date: 18/1/2024 Rev Date: 13/12/2023
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Current Manufacturing facilities surveyed by: <u>A. Pesce, ESA.</u> on 11 (Name of Executive Agency) (Date)
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain
Report Reference: <u>IST-AUD-2017</u>



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Non compliance to ESCC requirements:

No.:	Specification	Paragraph	Non compliance

16

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:

Executive Manager Disposition

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Application Approval: Yes No

Action / Remarks:

Date:

B. Schade: Head of the Product Assurance and Safety Department



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Failure Analysis, DPA, NCCS available: Yes No (Supply data)

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Ref. No's and purposes:

The undersigned hereby certifies on behalf of the ESCC Executive - that the above information is correct; - that the appropriate documentation has been evaluated; - that full compliance to all ESCC requirements is evidence (except as stated in box 15;) - that the reports and data are available at the ESCC Executive and therefore applies on behalf of ESA as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.

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Date: 18/01/2024

Denis Lacombe

Digitally signed by Denis Lacombe
Date: 2024.01.19
14:42:12 +01'00'

(Signature of the Executive Coordinator)

Continuation of Boxes above:

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ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION

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Tests conducted in compliance with:

- ESCC 4006 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

ESCC Component Number	4006 015 02 00
ESCC Component Numer	4006 015 08 00

Detail Specification reference: 4006 015

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroups	Shock (Specified Pulse)	<input type="checkbox"/>	MIL-STD-202, Test Method 213				ESCC Detail Specification 4006/015
	Vibration	<input type="checkbox"/>	MIL-STD-202, Test Method 204				ESCC Detail Specification 4006/015
	Dielectric Withstanding Voltages	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.9	4023	24	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4123	24	0	
	Thermal Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 107	4423	24	0	
	Resistance to Soldering Heat	<input type="checkbox"/>	MIL-STD-202, Test Method 210				ESCC Detail Specification 4006/015
	Moisture Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 106	4523	24	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4823	24	0	
	Dissipation Constant	<input type="checkbox"/>	ESCC 4006 Para. 8.3.1.2				ESCC Detail Specification 4006/015
	Thermal Time Constant	<input type="checkbox"/>	ESCC 4006 Para. 8.3.1.3				ESCC Detail Specification 4006/015
	Solderability	<input type="checkbox"/>	MIL-STD-202, Test Method 208				ESCC Detail Specification 4006/015
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 211	4123	24	0	
	External Visual Inspection	<input type="checkbox"/>	ESCC Basic Specification No. 20500				ESCC Detail Specification 4006/015



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Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Endurance Subgroups	Short Time Load	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.16	2923	40	0	
	Low Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.17	2923	40	0	
	Operating Life	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 108	3023	40	0	
	Permanence of Marking	<input type="checkbox"/>	ESCC Basic Specification No. 24800				ESCC Detail Specification 4006/015
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4823	40	0	
	Short Time load	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.16	2923	40	0	
	Low Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.17	3023	40	0	
	High Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.20	3023	40	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4823	40	0	
Additional Tests		<input checked="" type="checkbox"/>				0	
		<input type="checkbox"/>					
		<input type="checkbox"/>					



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ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION

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Tests conducted in compliance with:

- ESCC 4006 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

ESCC Component Number	4006015 02 05 0100
ESCC Component Number	4006015 02 05 1000
ESCC Component Number	4006015 02 04 0100
ESCC Component Number	4006015 02 04 1000

Detail Specification reference: 4006015

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroups	Shock (Specified Pulse)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 213	3523	12	0	
	Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	3123	12	0	
	Dielectric Withstanding Voltages	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.9	3023	12	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	3723	12	0	
	Thermal Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 107	4423	12	0	
	Resistance to Soldering Heat	<input type="checkbox"/>	MIL-STD-202, Test Method 210				ESCC Detail Specification 4006/015
	Moisture Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 106	4523	12	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4823	12	0	
	Dissipation Constant	<input type="checkbox"/>	ESCC 4006 Para. 8.3.1.2				ESCC Detail Specification 4006/015
	Thermal Time Constant	<input type="checkbox"/>	ESCC 4006 Para. 8.3.1.3				ESCC Detail Specification 4006/015
	Solderability	<input type="checkbox"/>	MIL-STD-202, Test Method 208				ESCC Detail Specification 4006/015
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 211	4723	12	0	
External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4823	12	0		



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Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Endurance Subgroups	Short Time Load	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.16				ESCC Detail Specification 4006/015
	Low Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.17				ESCC Detail Specification 4006/015
	Operating Life	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 108				ESCC Detail Specification 4006/015
	Permanence of Marking	<input type="checkbox"/>	ESCC Basic Specification No. 24800				ESCC Detail Specification 4006/015
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500			0	ESCC Detail Specification 4006/015
	Short Time load	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.16	3023	20	0	
	Low Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.17	3023	20	0	
	High Temperature Storage	<input checked="" type="checkbox"/>	ESCC 4006 Para. 8.20	3023	20	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	4323	20	0	
Additional Tests		<input type="checkbox"/>				0	
		<input type="checkbox"/>					
		<input type="checkbox"/>					

ENTRIES

Form heading

shall indicate: - the title of the component as given in its detail specification or the name of the series, family; - the Executive Member; - the entering date; - the certificate number and its sequential suffix.

Box 1

shall provide details given in the table; in particular there shall be listed: - the variants or range of variants; - the range of components (the ESCC code is recommended to indicate the values or values range, the tolerance, the voltage, etc); the designation given in the detail specification as 'base on'; - under Test Vehicle enter either an ESCC code or the specific characteristic capable of identifying the component tested (e.g., voltage of coil for a relay); - under component similar enter a cross if relevant.

Box 2; 3 and 4

As per QPL entry; otherwise, an explanation of the changes must be supplied.

Box 5

Will show the ESCC Generic and Detail specifications, including issue number and revision letter, current at the time the tests reported were performed. If the specifications are different from those current on the date of the application, see Box 6.

Box 6

Will show the deviations from the Generic and Detail Specifications listed in Box 5, in particular deviations from testing. In case of deviations this must be listed in Box 15. In case the referenced specification in Box 5 have currently a different issue and/or revision indicate also whether the test data deviates or not from such current documents.

Box 7

Must reference the report(s) supplied in support of the application.

Box 8

Should provide the details of procurement to the full ESCC System, documentation of all of which should already have been delivered to the ESCC Executive under the terms of the relevant Generic Specification. An appropriate table has been drawn in this box.

Box 9

If the PID evolved after the Original Qualification or after the last Extension of Qualification, adequate details of such evolution shall be provided together with the reasons for the changes. Major changes shall be clearly marked.

Box 10

Identify the current PID issue status, date and actual date of verification. The date of verification of the current PID should be arranged as close as possible to the required date of extension.

Box 11

This box can be completed only after a physical visit to the plant to confirm that no unexplained changes occurred and that the practices, procedures, material, etc. used in manufacturing the components are as described in the PID. This survey shall be carried out in accordance with the requirements of ESCC Basic Specification No. 20200 and its findings shall be recorded.

Box 12

Provide details of, or reference to, any Destructive Physical Analysis (DPA) and Failure Analysis reports as well as any Nonconformance(s) (NCCS) occurred during the qualification validity period, stating if established corrective action have produced satisfactory results.

Box 13

Enter only the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature of the responsible Executive Coordinator.

Box 14

To be used when there is a need to expand any of the boxes from 1 through 12. Identify box affected and reference the Box 14 in the relevant Box. Box 14 can be broken into 14a, 14b, etc. if several boxes have to be expanded.

Box 15

Fill in Table as requested.

Box 16

Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.

Box 17

All Executive Manager recommendations on the application itself, special conditions or restrictions, modifications of the QPL or QML entry, letters to the manufacturer, etc. shall be entered clearly in Box 19, signed by the representative for ESA, and dated.

Box 18

Fill in Table as requested.

Box 19

Confidential Details of PID changes including those of a confidential nature, shall be provided.

Box 20

State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 16 each nonconformance shall be sequentially numbered. If relevant state 'None'.

Box 21

Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.

Box 22

Additional Comments.