



APPLICATION FOR ESCC TECHNOLOGY FLOW QUALIFICATION

Component Title: RESISTORS, HEATERS, FLEXIBLE, SINGLE AND DOUBLE LAYER

Executive Member:

Date 28/01/2026

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Technology Flow submitted for qualification

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Summary Description of Technology flow	Detailed Technology Flow Description No.	BASED On Technology	Test Structures	Components Proposed for Qualification
Single, Double layer heaters ESCC 4009/004 Variants 01 through 48	IRCA_italy_qml_page	Flexible heaters	Charts F2, F3, F4 of ESCC 4009 & ESCC 4009/004	400900404 R5345
Single, Double layer heaters ESCC 4009/004 Variants 01 through 48	IRCA_italy_qml_page	Flexible heaters	Charts F2, F3, F4 of ESCC 4009 & ESCC 4009/004	400900404 R5241
Single, Double layer heaters ESCC 4009/004 Variants 01 through 48	IRCA_italy_qml_page	Flexible heaters	Charts F2, F3, F4 of ESCC 4009 & ESCC 4009/004	400900428 R5962

Component Manufacturer IRCA Spa	2	Location of Manufacturing Plant Via Podgora 26, 31029 Vittorio Veneto, Treviso, Italy	3	ESCC Specification used for Qualification	4
				Generic: 4009 Issue 08	
				Detail/s: ESCC Detail Specification 4009/004 Issue 7 ESCC Basic Specification No. 2544009 Issue 1	

Qualification Report Reference and date: 541/2025 date 17/09/2025; 534/2025 date 16/10/2025; 548/2025 of 02/12/2025	5	PID used for manufacturing Qualification Lot	6
Date:		Ref No: 5.34.16	
		Issue: 33	
		Date: 18/12/2025	

PID changes since Original Qualification or last extension of Qualification.	7	Current PID Verified by: ESA	8
None <input checked="" type="checkbox"/>		Name of Executive Representative	
Minor* <input type="checkbox"/>		Ref No: 5.34.16	
Major* <input type="checkbox"/> *See details in Box 20		Issue: 33	
		Date: 18/12/2025	

Current Manufacturing facilities surveyed by:	ESA	on	25/11/2025	9
	(Name of Executive Responsible)		(Date)	
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Corrective Actions closed out	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		

Quality and Reliability Data		Failure analysis, DPA, NCCS available (supply data)	10
Evaluation testing performed	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Report Ref. No.: See point 5	Date:	Ref. Nos. and purpose:	
Equivalent Data:			
Certification:			



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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.

Date:

**Denis
Lacombe**

Digitally signed by Denis
Lacombe
Date: 2026.01.29
11:34:45 +01'00'

(Signature of the Executive Coordinator)

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Continuation of Boxes above:



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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance

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

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N/A

Executive Manager Disposition

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Application Approval: Yes No

Action / Remarks:

Date: 30/01/2026


A.Zadeh - Head of the Avionics and EEE Division



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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 4009 generic specification; Chart F4 (for ESCC/QPL/QML parts);
- Or PID-TFD 5.34.16 rev.33 (for ESCC/QPL/QML parts)

Test vehicle identification/description:

R5345; R5241; R5962	Etched foil flexible heater
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Detail Specification reference: ESCC 4009/004

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
Environmental/ Mechanical Subgroup	Robustness of Terminations	X	IEC 60068-2-21	2520A 2526A 2536A	5 5 5	0	None
	Climatic Sequence	X	ESCC 4009, Para. 8.7	2520A 2526A 2536A	5 5 5	0	None
	External Visual Inspection	X	ESCC 20500	2520A 2526A 2536A	5 5 5	0	None
Endurance Subgroup	Operating Life	X	ESCC 4009, Para. 8.8	2520A 2526A 2536A	5 5 5	0	None
	External Visual Inspection	X	ESCC 20500	2520A 2526A 2536A	5 5 5	0	None
	Permanence of marking	X	ESCC 24800	2520A 2526A 2536A	5 5 5	0	None
Additional tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					