

		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL			Page 1 Appl. No. 376B
		Component Title: 2A Synchronous Rectified Step-Down converter SPPL12420RH			
		Executive Member: DLR			Date: 17/04/2026
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
910201401P	Variant 01	-	SPPL12420RH	-	-
Component Manufacturer Space IC GmbH		2	Location of Manufacturing Plant(s) Garbsener Landstraße 10 30419 Hannover, Germany (fabless company)		3
			Date of original qualification approval: Date: 01/11/2021 Certificate Ref No. 376		4
ESCC Specifications used for Maintenance of qualification testing: Generic: 9000 Issue: 12 Detail(s): 9102/014 Issue: 2		5	Deviations to LVT testing and Detail Specification used: No ☒ Yes ☐ (supply details in Box 15) Deviation from current Specifications: No ☒ Yes ☐ (Supply details)		6
			Qualification Extension Report reference and date: Qualification Testing in progress. Completion July-/2026		7
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	
Multiple projects	ESCC		2442A, 2445A (RHe)	Refer to Annex 3 (confidential) for further details	
Multiple projects	ESCC		2516A, 2551A (FSL)	Refer to Annex 3 (confidential) for further details	
PID changes since start of qualification None ☐ Minor* ☐ Major* ☒		9	Current PID Verified by: Burak Gökgöz (DLR) Name of Executive Representative Ref No: PID.PL12420.01 Issue: 1.5 Date: 21/10/2025 Rev Date: 21/10/2025		10
*Provide details in box: Change of assembly house from RHe to Lewicki (FSL) – new assembly procurement spec, new FSL PID subdocuments, change of purchasing flow for CFP-16 package					
Current Manufacturing facilities surveyed by: Burak Gökgöz (DLR) on 17/03/2026 (Name of Executive Representative) (Date)					11
Satisfactory: Yes ☒ No ☐ Explain					
Report Reference: SPACE IC-AUD-DLR-03-2026 Iss1					



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

Ref. No's and purposes: NCCS 2DSIC501 - Delay of periodic maintenance of qualification (6m extension)
NCCS 1DSIC601 - Component Damaged with burned bond wires at SW pins during electrical testing

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 DLR as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.

Date: 24/04/2026

Billzak gálógó

Digital signiert von Burak Gökgoz
DN: C=DE, CN=Burak Gökgoz, O=Deutsches Zentrum fuer
Luft- und Raumfahrt e. V. (DLR), ST=Nordrhein-Westfalen,
E=burak.goekgoez@dlr.de, postalCode=51147, street=
Linder Höhe
Grund: Ich bin der Verfasser dieses Dokuments
Ort: Bonn
Datum: 2026.04.24 08:12:51+02'00'

(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:

- Delta Evaluation test results (ETR.PL12420.02 Rev1.0) following ESCC 2269000
- Screening results (SCR.PL12420.08 Rev1.1) following ESCC 9000Chart F3A
- In progress, chart F4A ESCC 9000 for Environmental/mechanical, Endurance and Assembly subgroups

Tests vehicle identification/description:

Components from 2516A assembled by FSL used for ESCC Evaluation
 Components from 2551A assembled by FSL used for ESCC Qualification

Detail Specification reference: 9102/014

Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroup	Mechanical Shock	☒	MIL-STD-883, Test Method 2002	DC 2551A S47709	15	0	
	Vibration	☐	MIL-STD-883, Test Method 2007	DC 2551A S47709	15	0	
	Constant Acceleration	☐	MIL-STD-883, Test Method 2001	DC 2551A S47709	15	0	
	Seal (Fine and Gross Leak)	☐	MIL-STD-883, Test Method 1014	DC 2551A S47709	15	0	
	Intermediate and End-Point Electrical Measurements	☐	Intermediate and End-Point Electrical Measurements in the Detail Specification	DC 2551A S47709	15	0	
	External Visual Inspection	☐	ESCC Basic Specification No. 20500	DC 2551A S47709	15	0	
	Thermal Shock	☐	MIL-STD-883. Test Method 1011	DC 2551A S47709	15	0	
	Moisture Resistance	☐	MIL-STD-883, Test Method 1004	DC 2551A S47709	15	0	
	Seal (Fine and Gross Leak)	☐	MIL-STD-883, Test Method 1014	DC 2551A S47709	15	0	
	Intermediate and End-Point Electrical Measurements	☐	Intermediate and End-Point Electrical Measurements in the Detail Specification	DC 2551A S47709	15	0	
	External Visual Inspection	☐	ESCC Basic Specification No. 20500	DC 2551A S47709	15	0	

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Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Endurance Subgroup	Operating Life	☐	MIL-STD-883, Test Method 1005	DC 2551A S47709	15	0	
	Intermediate and End-Point Electrical Measurements	☐	Intermediate and End-Point Electrical Measurements in the Detail Specification	DC 2551A S47709	15	0	
	Seal (Fine and Gross Leak)	☐	MIL-STD-883, Test Method 1014	DC 2551A S47709	15	0	
	External Visual Inspection	☐	ESCC Basic Specification No. 20500	DC 2551A S47709	15	0	
Assembly Capability Subgroup	Permanence of Marking	☐	ESCC Basic Specification No. 24800				according to ESCC 24800 §3.1.3 not applicable to components exclusively marked using a permanent engraving (here laser marking)
	Terminal Strength	☐	MIL-STD-883, Test Method 2004	DC 2551A S47709	5	0	
	Internal Visual Inspection	☐	ESCC Basic Specification No. 20400	DC 2551A S47709	5	0	
	Bond Strength	☐	MIL-STD-883 Test Method 2011	DC 2551A S47709	2	0	
	Die Shear or Substrate Attach Strength	☐	MIL-STD-883 Test Method 2019 or 2027	DC 2551A S47709	2	0	
Additional Tests		☐					
		☐					
		☐					

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NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL 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.		

ANNEX 3: Confidential information.

The following information is summary of procurement, projects and quantities from Space IC in the last years.
This information shall be considered as confidential and available to ESCC Executive and ESA only.

Project Name	Testing Level	LAT	Date Code	Quantity Delivered
Copernicus	ESCC	X	2039A	10
Artemis 3 / xEMU	ESCC	X	2320A	25
DLR	ESCC	X	2445A	200
DLR	ESCC	X	2442A	200
Compasso	ESCC	X	2039A	8
Copernicus	ESCC	X	2039A	17
FORUM	ESCC	X	2039A	5
ARIEL	ESCC	X	2039A	20
ELOIS	ESCC	X	2039A	2
ARIEL	ESCC	X	2039A	6
Copernicus	ESCC	X	2039A	13
CCE	ESCC	X	2039A	8
SARah2	FM	X	1525A	24
OpSat	FM	X	1525A	24
DPA	FM	X	1525A	3
OpSat	FM	X	1525A	80
Copernicus	QM		1740A	2
ARIEL	QM		1740A	13
EPDP/Heinrich Hertz	QM		1740A	3
OpSat	QM		1740A	17
CubeSat	EM		1740A	2
Engineering	EM		1740A	3
CubeSat	EM		1740A	2
CubeSat	EM		1740A	2
Artemis 3 / xEMU	EM		1740A	11
CubeSat	EM		1740A	4
Copernicus	EM		1740A	7
CubeSat	EM		1740A	3
Engineering	EM		1740A	6
Copernicus	EM		1740A	3
Engineering	EM		1740A	10
Magnetometer	EM		1740A	5
ARIEL	EM		1740A	14
Copernicus	EM		1740A	9
CubeSat	EM		1740A	3
Engineering	EM		1614A	2
Engineering	EM		1740A	3
ARIEL	EM		1740A	15
ELOIS	EM		1740A	4
Compasso	EM		1740A	4
Romeo	EM		1740A	7
Copernicus	EM		1614A	3
eXTP	EM		1614A	12
CubeSat	EM		1614A	8
CubeSat	EM		1740A	1
CEE	EM		1740A	3
OpSat	EM		1740A	42