

		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL			Page 1 Appl. No. 225L
Component Title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX		Executive Member: CNES		Date: 17/06/2025	
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
5512/016	10 to 57 except 16, 26, 36, 46 & 56		DH252, EH252, DH256, EH256, DH267, EH267, DH292, EH292, DH294 and EH294		
5513/031	01 to 48, 57 to 63 except 14, 21, 28, 35 & 42		DH50151 to DH50157 and EH50151 to EH50157		
5513/032	01 to 35, 41 to 45 except 07, 14, 21, 28 & 35		DH50033 to DH50037 and EH50033 to EH50037		
5513/033	01 to 48, 71 to 79, except 07, 14, 21, 28, 35 & 42		DH50201 to DH50209 and EH50201 to EH50209		
5513/034	1 to 34, 42 to 47 except 07, 14, 21 & 28		DH50251 to DH50256 and EH50251 to EH50256		
5513/036	1 to 41, 49 to 54 except 07, 14, 21, 28 & 35		DH50052 to DH50057 and EH50052 to EH50057		
5513/037	01 to 48, 57 to 63 except 07, 14, 21, 28, 35 & 42		DH50071 to DH50077 and EH50071 to EH50077	5513/037-36	
5513/038	01 to 48, 57 to 63 except 07, 14, 21, 28, 35 & 42		DH50101 to DH50107 and EH50101 to EH50107		
5512/023	1 to 6, 10 to 15, 19 to 24, 28 to 33, 37 to 42, 46 to 51, 55 to 60, 64 to 69, 73 to 80	Click here to enter text.	DH76XXX and EH76XXX	5512/023-65	
Component Manufacturer EXENS Solutions		2	Location of Manufacturing Plant(s) 3 avenue de Pacifique – Z.A. de Courtaboeuf 91940 Les Ulis France		4
			Date of original qualification approval: Date: 01/06/1995 Certificate Ref No. 225		
ESCC Specifications used for Maintenance of qualification testing: Generic: 5010 Issue: 3 Detail(s): 5512/016 Issue: 8 5513/034 Issue: 7 5513/037 Issue: 7 5512/023 Issue: 7		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)		7
			Qualification Extension Report reference and date: 20241223247-223 Rev. B, 06/05/2025 20250323608-223 Rev. B, 06/05/2025 20241022967-223 Rev. B, 06/05/2025 20241223244-223 Rev. B, 06/05/2025		
8					
Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)					
Project Name	Testing Level	LAT	Date code	Quantity Delivered	
Various		Chart F4	Various (2023, 2024)	> 1000	

PID changes since start of qualification		9	Current PID Verified by: J.L. Roux		10
None	<input type="checkbox"/>		Name of Executive Representative		
Minor*	<input checked="" type="checkbox"/>		Ref No: 350		
Major*	<input type="checkbox"/>	*Provide details in box:	Issue: J	Date: 07/05/2025	
		19	Rev Date: 07/05/2025		
Current Manufacturing facilities surveyed by: ESA and CNES on 07/09/2022					11
(Name of Executive Representative)					(Date)
Satisfactory:	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Explain
Report Reference:	DTN/QE/EC-2022-0013332				

	<p align="center">APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</p> <p>Component title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX</p> <p>Executive Member: CNES Date: 17/06/2025</p>	<p align="center">Page 2</p> <p align="center">Appl. No.</p> <p align="center">225L</p>
<p>Failure Analysis, DPA, NCCS available: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (Supply data) 1CEXE401, 2CEXE402, 2CEXE501</p> <p>Ref. No's and purposes: NCCS 2CEXE402: Exceeding the authorized deadlines for the renewal of qualification (closed) NCCS 1CEXE401: Lack of passivation and Contamination (closed) NCCS 2CEXE501: Leak test issue on F27d package (closed)</p>		
<p>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 CNES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.</p> <p>Date: 17/06/2025</p> <div style="text-align: right;">  <p>Signature numérique de Fontaine Lya Date : 2025.06.17 14:49:24 +02:00</p> <p>L. FONTAINE (Signature of the Executive Coordinator)</p> </div>		
<p>Continuation of Boxes above:</p> <p>NCCS 1CEXE401 :</p> <p>On a production lot (DC1810) the combination of passivation issue and ionic contamination led to non-conformance of some diodes. Investigations were carried out to refine the perimeter and information was sent to the customers concerned. Since 2021, Exens has improved chip assembly conditions and eliminated the source of contamination. In addition, Exens decided that any RFW from the visual inspection is no longer permitted for lack of passivation issue. These corrective actions allow the NCCS to be closed.</p> <p>NCCS 2CEXE402 : Delay on qualification testing for the certification renewal 225K and 286G. The NCCS is closed.</p> <p>NCCS 2CEXE501 :</p> <p>Exens failed obtaining good assembly yield of the chips in the Pill-G packages (F27d). Too many parts are non-compliant with fine leak and must be rejected in chart F2. Exens is investigating the possible root causes to solve the problem and restore satisfactory production of this specific package, which are in very low demand for space (last order in 2018). The other packages (Pill-A to F) do not pose any problems. In the meantime, it is proposed to temporarily remove this Pill-G package from qualified variants, and Exens is prohibited from taking orders or delivering parts using this package.</p>		

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX
Executive Member: CNES Date: 17/06/2025

Page 3
Appl. No.
225L

Non compliance to ESCC requirements:

15

No.:	Specification	Paragraph	Non compliance

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

16

As explained in Box14, Pill-G packaged diodes are temporarily removed from the list of qualified products. These variants are in very low demand. They may eventually be returned to the list of qualified products once Exens has regained control of the assembly processes on these packages.

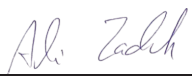
Executive Manager Disposition


17

Application Approval: Yes ☒ No ☐

Action / Remarks:

Date: 26/06/2025


A. Zadeh: Head of the Avionics & EEE Division,
Electrical Department

	APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Component Title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX Executive Member: CNES Date: 17/06/2025	Page 4 Appl. No. 225L						
ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION								
Tests conducted in compliance with: <ul style="list-style-type: none"> - ESCC 5010 generic specification; Chart 2, 3A, 4A (for ESCC/QPL parts); - Or PID-TFD (for ESCC/QML parts) 								
Tests vehicle identification/description:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DH50076-536Q (5513/037-xx)</td> <td style="width: 50%;">DH50076 – Pill A package</td> </tr> <tr> <td>DH76150-501Q (5512/023-xx)</td> <td>DH76150 – Pill B package</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>			DH50076-536Q (5513/037-xx)	DH50076 – Pill A package	DH76150-501Q (5512/023-xx)	DH76150 – Pill B package		
DH50076-536Q (5513/037-xx)	DH50076 – Pill A package							
DH76150-501Q (5512/023-xx)	DH76150 – Pill B package							
Detail Specification reference: ESCC 5512/016, 5512/023, 5513/034, 5513/037								

18

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 Subgroups	Thermal Cycling	<input checked="" type="checkbox"/>	ESCC 5010 Para. 8.8.2	23J015A (DC2443) 20H013A (DC2438)	2 x 6	0	Performed on : DH50076 Pill A, DH76150 Pill B
	Mechanical Shock Test	<input type="checkbox"/>	MIL-STD-750 Test Method 2016				Not applicable
	Vibration Test	<input type="checkbox"/>	MIL-STD-750 Test Method 2056				Not applicable
	Constant Acceleration	<input type="checkbox"/>	MIL-STD-750 Test Method 2006				Not applicable
	Seal Test	<input type="checkbox"/>	MIL-STD-750 Test Method 1071				Not applicable
	Moisture Resistance	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1021	Same as above	2 x 6	0	Performed on : DH50076 Pill A, DH76150 Pill B
	Seal Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1071	Same as above	2 x 6	0	Same as above
	Electrical Measurements at Room Temp.	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	Same as above	2 x 6	0	Same as above
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	Same as above	2 x 6	0	Same as above
Endurance Subgroup	Operating Life	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1026	Same as above	2 x 8	0	Same as above
	Electrical Measurements during Endur. Test	<input checked="" type="checkbox"/>	Table 6 of the Detail Specification	Same as above	2 x 8	0	Same as above
	Seal test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1071	Same as above	2 x 8	0	Same as above
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	Same as above	2 x 8	0	Same as above

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX

Executive Member: CNES

Date: 17/06/2025

Page 5

Appl. No.

225L

Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Assembly Capability Subgroup Tests	Solderability Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2026	Same as above	2 x 2	0	Same as above
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	Same as above	2 x 2	0	Same as above
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2036	Same as above	4	0	Performed on : DH50076 Pill A
De-encapsulation Subgroup	Thermal Impedance Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 3101	Same as above	2 x 4	0	Performed on : DH50076 Pill A, DH76150 Pill B
	Forward Voltage Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 4011	Same as above	2 x 4	0	Same as above

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component title: DIODES, MICROWAVE, SILICON, MULTIPLIER, PIN AND
VARACTOR, BASED ON TYPES DH 2XX, DH 50XXX AND DH76XXX
Executive Member: CNES Date: 17/06/2025

Page 7

Appl. No.

225L

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.