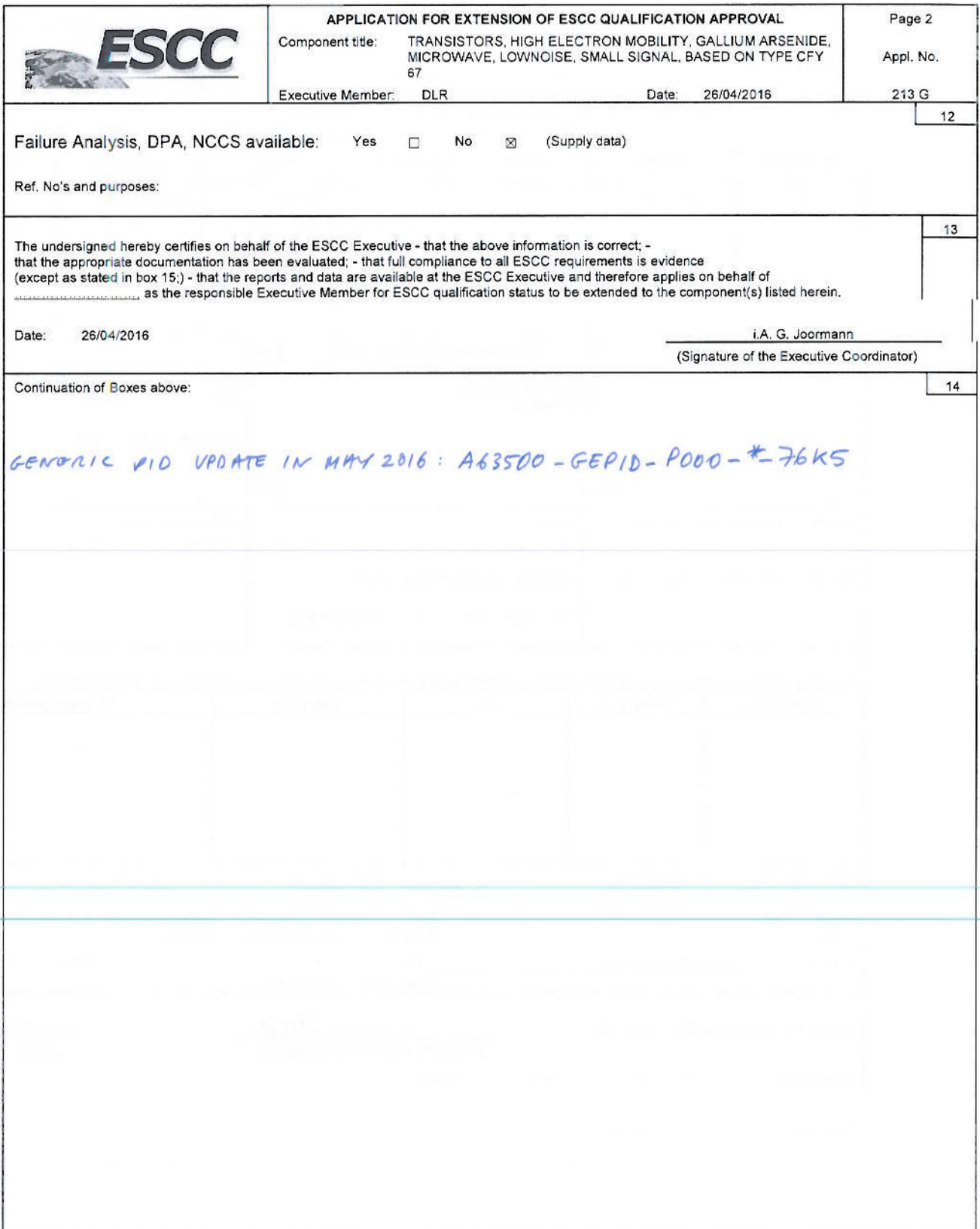



		<b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b>				Page 1  Appl. No. 213 G
Component Title: TRANSISTORS, HIGH ELECTRON MOBILITY, GALLIUM ARSENIDE, MICROWAVE, LOWNOISE, SMALL SIGNAL, BASED ON TYPE CFY 67		Executive Member: DLR		Date: 26/04/2016		
Components (including series and families) submitted for Extension of Qualification Approval:						1
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR	
5613/004	01, 02, 03, 04		CFY 67	CFY67-08(ES)		
Component Manufacturer: Infineon Technologies AG		Location of Manufacturing Plant(s): Am Campeon 1-12 D-85579 Neubiberg Germany		Date of original qualification approval: 01/04/1994  Certificate Ref No. 213		
ESCC Specifications used for Maintenance of qualification testing: Generic 5010 Issue: 02 Detail(s) 5613/004 Issue: 02		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)		Qualification Extension Report reference and date: 1609LR14, Iss. 1, Mar 2016		
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: None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> *Provide details in box:			Current PID Verified by: J. Tetziuff  Name of Executive Representative Ref No: A63500-T409-B1--1B-76K5 Issue: 1, E Date: 15/12/1999 Rev Date: 25/11/1999			
Current Manufacturing facilities surveyed by: G. Joermann (DLR) on 08/12/2015 (Name of Executive Representative) (Date)			Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain  Report Reference: IFX-AUD-2015			



		<b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b> Component title: TRANSISTORS, HIGH ELECTRON MOBILITY, GALLIUM ARSENIDE, MICROWAVE, LOWNOISE, SMALL SIGNAL, BASED ON TYPE CFY 67 Executive Member: DLR		Page 3 Appl. No. 213 G Date: 26/04/2016
Non compliance to ESCC requirements:				15
No.:	Specification	Paragraph	Non compliance	
1	ESCC 5010	chart F4	no periodic repetition of Endurance SG.	
Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:				16
The approved PID describes the agreed methodology for maintenance of qualification regarding similarity in its Para.7				
Executive Manager Disposition				17
Application Approval: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Action / Remarks:				
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div>Date:</div> <div style="text-align: right;">             Signature, ESA Representative         </div> </div>				

	<b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b>		Page 4
	Component Title: TRANSISTORS, HIGH ELECTRON MOBILITY, GALLIUM ARSENIDE, MICROWAVE, LOWNOISE, SMALL SIGNAL, BASED ON TYPE CFY 67		Appl. No.:
	Executive Member: DLR	Date: 26/04/2016	213 G

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

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Tests conducted in compliance with:

- ESCC 5010 generic specification: Chart V (for ESCC/QPL parts);
- Or PID-TFD A63500-T409-B1-\*76K5 (for ESCC/QML parts)

Tests vehicle identification/description:

CFY67-08(ES)	

Detail Specification reference: 5613 004 / 01

Chart V	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 Shock Test	<input checked="" type="checkbox"/>	ESCC 5010 Para. 9.5.2	1422A	8	0	
	Shock Test	<input type="checkbox"/>	MIL-STD-750 Test Method 2016				n.a. acc. Detail Spec
	Vibration Test	<input type="checkbox"/>	MIL-STD-750 Test Method 2056				n.a. acc. Detail Spec
	Constant Acceleration	<input type="checkbox"/>	MIL-STD-750 Test Method 2006				n.a. acc. Detail Spec
	Seal Test	<input type="checkbox"/>	MIL-STD-750 Test Method 1071				n.a. acc. Detail Spec
	Moisture Resistance	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1021	1422A	8	0	
	Seal Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1071	1422A	8	0	
	Electrical Measurements at Room Temp.	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1422A	8	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1422A	8	0	
Endurance Subgroup	Operating Life	<input type="checkbox"/>	MIL-STD-750 Test Method 1026				Former data from Wafer available
	Electrical Measurements during Endur. Test	<input type="checkbox"/>	Table 6 of the Detail Specification				Former data from Wafer available
	External Visual Inspection	<input type="checkbox"/>	ESCC Basic Specification No. 20500				Former data from Wafer available

\* LATZ successfully passed on actual wafer when used  
 in: assembly lot      date code  
       1007.02                1016A  
       0715.02                0716B






APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL  
Component title: TRANSISTORS, HIGH ELECTRON MOBILITY, GALLIUM ARSENIDE, MICROWAVE, LOWNOISE, SMALL SIGNAL, BASED ON TYPE CFY 67  
Executive Member: DLR Date: 26/04/2016

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Chart V	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed, Comments on Rejection
Electrical Subgroup - Electrical Measurements	Electrical Measurements at Room Temp.	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1422A	5	0	
	Electrical Measurements at High & Low Temp's	<input checked="" type="checkbox"/>	Table 3 of the Detail Specification	1422A	5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1422A	5	0	
	Special Testing	<input type="checkbox"/>	The Detail Specification				n.a. acc. Detail Spec
Electrical Subgroup - Assembly Capability Tests	Solderability Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2026	1422A	5	0	
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	1422A	5	0	
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2036	1422A	5	0	
De-encapsulation Tests	Internal visual inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20400	1422A	8	0	
	Bond Strength	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2037	1422A	8	0	
	Die Shear	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2017	1422A	8	0	

	<p align="center"><b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b></p> <p>Component title: TRANSISTORS, HIGH ELECTRON MOBILITY, GALLIUM ARSENIDE, MICROWAVE, LOWNOISE, SMALL SIGNAL, BASED ON TYPE CFY 67</p> <p>Executive Member: DLR</p>	<p align="right">Page 7</p> <p align="right">Appl. No.</p> <p align="right">213 G</p>
<p align="center"><b>NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL</b></p>		
<p><b>ENTRIES</b> Form heading</p>	<p>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.</p>	
<p><b>Box 1</b></p>	<p>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.</p>	
<p><b>Box 2; 3 and 4</b></p>	<p>As per QPL entry; otherwise, an explanation of the changes must be supplied.</p>	
<p><b>Box 5</b></p>	<p>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.</p>	
<p><b>Box 6</b></p>	<p>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.</p>	
<p><b>Box 7</b></p>	<p>Must reference the report(s) supplied in support of the application.</p>	
<p><b>Box 8</b></p>	<p>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.</p>	
<p><b>Box 9</b></p>	<p>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.</p>	
<p><b>Box 10</b></p>	<p>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.</p>	
<p><b>Box 11</b></p>	<p>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.</p>	
<p><b>Box 12</b></p>	<p>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.</p>	
<p><b>Box 13</b></p>	<p>Enter only the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature of the responsible Executive Coordinator.</p>	
<p><b>Box 14</b></p>	<p>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.</p>	
<p><b>Box 15</b></p>	<p>Fill in Table as requested.</p>	
<p><b>Box 16</b></p>	<p>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.</p>	
<p><b>Box 17</b></p>	<p>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.</p>	
<p><b>Box 18</b></p>	<p>Fill in Table as requested.</p>	
<p><b>Box 19</b></p>	<p>Confidential Details of PID changes including those of a confidential nature, shall be provided.</p>	
<p><b>Box 20</b></p>	<p>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'.</p>	
<p><b>Box 21</b></p>	<p>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.</p>	
<p><b>Box 22</b></p>	<p>Additional Comments.</p>	