



		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL				Page 1 Appl. No. 339A	
		Component Title: TRANSISTORS, POWER, MOSFET, N-CHANNEL, RADHARD BASED ON TYPE BUY15CS				Executive Member: DLR	
		Date: 23/10/2018					
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		
520503101R	01	all	BUY15CS23J-01	BUY15CS57A-01(ES) BUY15CS45B-01(ES)			
520503102R	02	all	BUY15CS57A-01				
520503103R	03	all	BUY15CS23K-01				
520503104R	04	all	BUY15CS45B-01				
Component Manufacturer Infineon Technologies		Location of Manufacturing Plant(s) Am Campeon 1-12 D85579 Neubiberg Germany		Date of original qualification approval: Date: 25/05/2016 Certificate 339 Ref No.			
ESCC Specifications used for Maintenance of qualification testing: Generic: 5000 Issue: 06 Detail(s): 5205/031 Issue: 01		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: 1808LR20 Iss 1, Jun 2018 1808LR21 Iss 1, June 2018 1808LR22 Iss 1, June 2018			
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			
PID changes since last MoQ None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/>		Current PID Verified by: B. Gökgöz Ref No: Generic PID: A63500-GEPID-P000, Issue 2c, 18.10.2018 Detail PID: A63500-L5491-P000, Issue 7a, 18.10.2018 Issue: See above Rev Date: 26/10/2018		Name of Executive Representative Date: See above			
*Provide details in box: Please see Detail PID		10					
Current Manufacturing facilities surveyed by:		T. Kaupisch and B. Gökgöz, DLR; L. Bonora and F. Martinez, ESA (Name of Executive Representative)				on 17-18/10/2018 (Date)	
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain							
Report Reference: IFX-AUD-2018							
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	<p align="center">APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</p> <p>Component title: TRANSISTORS, POWER, MOSFET, N-CHANNEL, RADHARD BASED ON TYPE BUY15CS</p> <p>Executive Member: DLR Date: 23/10/2018</p>	<p>Page 2</p> <p>Appl. No. 339A</p>
<p>Failure Analysis, DPA, NCCS available: Yes <input checked="" type="checkbox"/> No (Supply data)</p> <p>Ref. No's and purposes: 2DIFX801, closed-out in Jan. 2019</p>		<p align="center">12</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 DLR as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.</p> <p align="right">  B. Gökgoz (Signature of the Executive Coordinator) </p> <p>Date: 23/10/2018</p>		<p align="center">13</p>
<p>Continuation of Boxes above:</p>		<p align="center">14</p>

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Non compliance to ESCC requirements:				
No.:	Specification	Paragraph	Non compliance	
1	ESCC 5000iss 7 (July 2017)		issue 6 used for this maintenance of qualification	
Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:				
1. A revised update of the PID has been approved in October 2018.				
Executive Manager Disposition				
Application Approval: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Action / Remarks:				
Date:				
B. Schade, ESA Head of Product Assurance and Safety Department				

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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 V (for ESCC/QPL parts); 							
Tests vehicle identification/description:							
1808LR20	BUY25CS45B-01(ES), EndSG, AssCapSG f. TO packages, 1747B (see MOQ cert. 319C)						
1808LR21	BUY15CS45B-01(ES), EnvMechSG f. TO packages, 1722A						
1808LR22	BUY15CS57A-01(ES), AssCapSG f. SMD packages, 1708B						
Detail Specification reference: 5205/031							
Chart F4A	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroups	Shock Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2016	1722A	18	0	
	Vibration Test	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2056	1722A	18	0	
	Constant Acceleration	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2006	1722A	18	0	
	Seal Test (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-883, Test Method 1014, Test Condition A1 or A2	1722A	18	0	acc. Detail Spec
	Electrical Measurements at Room Temp.	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1722A	18	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1722A	18	0	
	Temperature Cycling	<input checked="" type="checkbox"/>	MIL-STD-883 Test Method 1010, Test Condition C, 20 cycles	1722A	18	0	acc. Detail Spec
	Moisture Resistance	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1021	1722A	18	0	
	Seal Test (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1071	1722A	18	0	
	Electrical Measurements at Room Temp.	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1722A	18	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1722A	18	0	
	Endurance Subgroup	Operating Life	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 1026	1747B	16	0
Electrical Measurements during Endur. Test		<input checked="" type="checkbox"/>	Table 6 of the Detail Specification	1747B	16	0	
External Visual Inspection		<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1747B	16	0	



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Chart F4A	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Assembly Capability Tests	Solderability Test	<input type="checkbox"/>	MIL-STD-750 Test Method 2026				n.a acc. Detail Spec
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	1708B	6	0	
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2036	1708B	6	0	
De- encapsulation Tests	Internal visual inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20400	1708B	6	0	
	Bond Strength	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2037	1708B	6	0	
	Die Shear	<input checked="" type="checkbox"/>	MIL-STD-750 Test Method 2017	1708B	6	0	

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	Executive Member: DLR	Date 23/10/2018 :	339A

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.