E	SCC	BAS	OR EXTENSION (ANSISTORS, MIC SED ON TYPES E DLR	Page 1 R, Appl. No	1 2			
Components (inclu	ding series and families) submitted for Extension of	Qualification App	oroval:				1
ESCC COMPONENT NO.	VARIANTS	RANGE OF COM	PONENTS	BASE ON	D	TEST VEHICLE/S	COMPONENT SIMILAR	.0.
5611/008 01, 02 and 03				BFY404, BFY420, BI	FY450	BFY420(ES)		
Component M Infineon Technolog	Will be reason of	Location of Manu Am Campeon 1-12 D-85579 Neubiberg Germany	ufacturing Plant(s)	3	Date:	of original qualification appr 01/06/1997 icate Ref No. 245	roval:	4
ESCC Specification Maintenance of qua Generic 5010 : Detail(s 5611/00)):	alification testing: Issue: 02	Deviations to LVT testinused: No Deviation from current No Yes	☐ (supply de	tails in Box	refere	fication Extension Report ence and date: .R11 , Mar 2016		7
		t results during current valid		100	lication	10.000	Canada de la companya del companya de la companya del companya de la companya de	8
Project Name	Testing Leve	I LAT	D	ate code		Quantity De	HIVERED	
PID changes since None □ Minor* ⊠ Major* □	start of qualification *Provide details in box:	9	Current PID Veby: Ref No: A	erified 63500 – T503		G. Joormann ame of Excutive Represent 3 - * - 76K5 Date:	ative 26.04.16	10

Rev Date: Apr 2016

(Name of Executive Representative)

G. Joormann (OCR) on

11

08/10/2015

(Date)

PID adjusted to new Generic Spec 5010

No 🗆 Explain

Current Manufacturing facilities surveyed by:

Satisfactory:

Report Reference:

Yes ⊠

IFX-AUD-2015

A STATE OF THE PARTY OF THE PAR	1 "	BASED ON		CROWAVE, SMALL BFY405, BFY420 AN		Appl. No
	Executive Member:	DLR			Date: 11/04/2016	245 G
						L
illure Analysis, DPA, NCCS av	/ailable: Yes	□ No	\boxtimes	(Supply data)		
f. No's and purposes:						
e undersigned hereby certifies on beha t the appropriate documentation has b						Γ
cept as stated in box 15:) - that the rec	orts and data are avail	lable at the ES	CC Exe	cutive and therefore	applies on behalf of	
as the responsible l	executive Member for E	ESCC qualifica	ition stati	us to be extended to	the component(s) listed herei	n. I
te: 26.04.16					i.A. G. Joorn	ann
					(Signature of the Executiv	e Coordinator)
ntinuation of Boxes above:					The second secon	

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Component title:

TRANSISTORS, MICROWAVE, SMALL SIGNAL, SILICON, BIPOLAR, BASED ON TYPES BFY405, BFY420 AND BFY450

Executive Member: DLR

Date: 11/04/2016

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Non com	pliance to ESCC requirements:			15
No.:	Specification	Paragraph	Non compliance	
7	Escc 50do	chart F4	periodic repetition of Endurance SG.	1
Additiona		or ESCC qualification or rationale for acceptabil	lity of	16
The m	approved PID of aintenance of sua	lescribes The agreed lipitation w.r.t. si	methodology for milanty in its Para. F)
Executive	e Manager Disposition			17
Application / F	on Approval: Yes 🗹 No ַ			
Date:			Color	
			Signature, ESA Representative	

Component Title: TRANSISTORS, MICROWAVE, SMALL SIGNAL, SILICON, BIPOLAR, BASED ON TYPES BFY405, BFY420 AND BFY450

11/04/2016 Date:

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Executive Member: DLR ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION 245 G

Tests conducted in compliance with:

Tests vehicle identification/description:

ESCC 5010 generic specification; Chart V (for ESCC/QPL parts); Or PID-TFD BFY405,420&450(ES) (for ESCC/QML parts)

BFY420(ES)	
Di 1125(25)	

5611 008 / 02 Detail Specification reference:

Chart V	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environm ental/Mec hanical Subgroup s	Thermal Shock Test		ESCC 5010 Para, 9.5.2	1434A	8	0	
	Shock Test		MIL-STD-750 Test Method 2016				n.a. acc. Detail Spec
	Vibration Test		MIL-STD-750 Test Method 2056				n.a. acc. Detail Spec
	Constant Acceleration		MIL-STD-750 Test Method 2006			23 8	n.a. acc. Detail Spec
	Seal Test		MIL-STD-750 Test Method 1071	N			n.a. acc. Detail Spec
	Moisture Resistance	⊠	MIL-STD-750 Test Method 1021	1434A	8	0	
	Seal Test	⊠	MIL-STD-750 Test Method 1071	1434A	8	0	
	Electrical Measurements at Room Temp.	×	Table 2 of the Detail Specification	1434A	8	0	
	External Visual Inspection	⊠	ESCC Basic Specification No. 20500	1434A	8	0	
Enduranc e Subgroup	Operating Life		MIL-STD-750 Test Method 1026				Former data from Wafer available
	Electrical Measurements during Endur. Test		Table 6 of the Detail Specification				Former data from Wafer available
	External Visual Inspection		ESCC Basic Specification No. 20500				Former data from Wafer available

* CATZ on actual water was passed on d.c. 00072 and 0714A



Component title:

TRANSISTORS, MICROWAVE, SMALL SIGNAL, SILICON, BIPOLAR, BASED ON TYPES BFY405, BFY420 AND BFY450

Executive Member:

DLR

Date: 11/04/2016

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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 Measure ments	Electrical Measurements at Room Temp.	×	Table 2 of the Detail Specification	1434A	4	0	
	Electrical Measurements at High & Low Temp's	×	Table 3 of the Detail Specification	1434A	4	0	
	External Visual Inspection	⊠	ESCC Basic Specification No. 20500	1434A	4	0	
	Special Testing		The Detail Specification				n.a. acc. Detail Spec
Electrical Subgroup — Assembly Capability Tests	Solderability Test	×	MIL-STD-750 Test Method 2026	1434A	4	0	
	Permanence of Marking	×	ESCC Basic Specification No. 24800	1434A	4	0	
	Terminal Strength	\boxtimes	MIL-STD-750 Test Method 2036	1434A	4	0	
De- encapsul ation Tests	Internal visual inspection	×	ESCC Basic Specification No. 20400	1434A	8	0	
i ests	Bond Strength		MIL-STD-750 Test Method 2037	1434A	8	0	
	Die Shear	×	MIL-STD-750 Test Method 2017	1434A	8	0	



Box 22

Additional Comments.

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component title:

TRANSISTORS, MICROWAVE, SMALL SIGNAL, SILICON, BIPOLAR, BASED ON TYPES BFY405, BFY420 AND BFY450

Executive Member: DLR

Date: 11/04/2016

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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.