ESCC

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title:

Transistor, Microwave, Small Signal, Silicon, Bipolar Based on Types BFY180 thru BFY183, BFY193, BFY196 and BFY280

Page 1 Appl. No.

Executive Member:

Date: 23/10/2018

2300

ESCC COMPONENT	VARIANTS	RANGE OF COM	PONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR	
NO. 5611/006	01 to 08	ON		BFY280 BFY181 BFY182 BFY183 BFY193	(See MOQ cert.322c)	CFY67	
	-						
Component Manufa Infineon Technologi		Location of Manufact Am Campeon 1-12 D- 85579 Neubiberg Germany	uring Plant(s)	3	Date of original qualification approval: Date: 01/06/1996 Certificate Ref 230 No.		
ESCC Specification Maintenance of qua Generic: 5010 Detail(s): 5611/0	lification testing: Issue: 02 09 Issue: 02	Deviations to LVT testing and Detail Specification used: No Yes (supply details in Box 15) Deviation from current Specifications: No Yes (supply details)			Qualification Extension Report reference and date: 1814LR10, Iss 1, April 2018 1814LR11, Iss 1, April 2018		
Summary of procure Project Name	ement or equivalent test r	esults during current va		upport of this appli	cation (those to ESCC listed to Quantity	first)	8
	N 100 (0)						ı
PID changes since	last MoQ	9	Current PID by:	Verified	B. Gökgöz		10
None □ Minor* ⊠ Major* □	*Provide details in box:		Issue:	Generic PID: Detail PID: See above 26/10/2018	Name of Executive Repres A63500-GEPID-P000, Is A63500-T359-P000, Is Date:	ssue 2c, 18.10.2018 ssue 4a, 18.10.2018	
			-	15	7080	10/10/0010	11
Current Manufactur	ing facilities surveyed by:	-	T. Kaupisc		on 17-	18/10/2018 (Date)	
Satisfactory:	Yes ⊠	*	olain	oprosontanve)		1-210)	
Report Reference:	IFX-AUD-2018						



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Transistor, Microwave, Small Signal, Silicon, Bipolar Based on Types BFY180 thru BFY183, BFY193, BFY196 and BFY280 Component title: Appl. No. Executive Member: DLR 23/10/2018 230 Date: 12 Failure Analysis, DPA, NCCS available: Yes No \boxtimes (Supply data) Ref. No's and purposes: 13 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: 23/10/2018 B. Gökgöz (Signature of the Executive Coordinator) Continuation of Boxes above: 14

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DLR

Date: 23/10/2018

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			The second of th	1
Non com	npliance to ESCC requirements:			15
No.:	Specification	Paragraph	Non compliance	
1	ESCC 5010	CHART F4A	No periodic repetition of Endurance Subgroup	,
	E3CC 3010	CHARTITA	No periodic repetition of Endurance outgroup	
2	5 66 50 0 155453		1,1,0	
2	ESCC 5010 issue3		iss 2 used for	
	(APRIL 2017)		MAINTENANCE OF	
			QUALIFICATION.	
			N. A. S.	
			r.	
	al tasks required to achieve full compliance for	ESCC qualification or rationale for acce	ptability of	12020
noncom	pliance:			16
The app	roved Detail PIDs describe the agreed method	ology for maintenance of qualification re	garding similarity in § 7	
70130 1000 1000				
0 =	iSED PID APPROVED	IN ACT 2018		
1000	Wich (10 Willone)	110 0000		
				_
Executiv	ve Manager Disposition			17
Applicati	ion Approval: Yes 🗹 No 🗆			
Action /	Remarks:			
			201	
			, S DU	
Date:			C.B. SCHAD	=-
			Signature of ESA Head of Product Assura	nce an
			Safety Department	

Component Title:

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Executive Member:

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

Tests conducted in compliance with:

ESCC 5010 generic specification; Chart V (for ESCC/QPL parts);

Tests vehicle identification/description:

1814LR10	BFY640-04(ES), EnvMechSG, AssCapSG, DecapSG, 1709A	
1814LR11	CFY67-08(ES), AssCapSG, 1632A	

Detail Specification reference: 5613/004 and 5611/009

Chart F4A	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
	Thermal Shock Test	×	MIL-STD-202 Test Method 107 Test Condition B, 100 cycle	1709A	10	0	acc. Detail Spec
sdnou	Shock Test		MIL-STD-750 Test Method 2016				n.a. acc. Detail Spec
Subg	Vibration Test		MIL-STD-750 Test Method 2056				n.a. acc. Detail Spec
anical	Constant Acceleration		MIL-STD-750 Test Method 2006				n.a. acc. Detail Spec
Environmental/Mechanical Subgroups	Seal Test (Fine and Gross Leak)		MIL-STD-750 Test Method 1071	1709A	10	0	
	Moisture Resistance	×	MIL-STD-750 Test Method 1021	1709A	10	0	
	Electrical Measurements at Room Temp.	×	Table 2 of the Detail Specification	1709A	10	0	
	External Visual Inspection	×	ESCC Basic Specification No. 20500	1709A	10	0	
Endurance 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

^{*} LAT1 on actual wafer was performed satisfactorily on Assembly Lot: 1008.1 with Date Code: 1015A



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Executive Member: DLR

Date: 23/10/2018

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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	\boxtimes	MIL-STD-750 Test Method 2026	1632A	2 4	0	
	Permanence of Marking	×	ESCC Basic Specification No. 24800	1632A	2 4	0	
	Terminal Strength	\boxtimes	MIL-STD-750 Test Method 2036	1632A	2 4	0	
De- encapsulation Tests	Internal visual inspection	×	ESCC Basic Specification No. 20400	1632A 1709A	2 6	0	
	Bond Strength	×	MIL-STD-750 Test Method 2037	1632A 1709A	2 6	0	
	Die Shear	×	MIL-STD-750 Test Method 2017	1632A 1709A	2 6	0	



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Executive Member: DLR Date 23/10/2018 Appl. No. 230

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

	NOTES ON THE SOURCE ENGINEER PROPERTY OF THE ATTEMPT ON THE ATTEMPT OF THE ATTEMP
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.