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Component Title: Rectifier Diodes based on types 1N6640U and 1N6642U

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September 1	366							Appl. No).
		Executive Memb	er: CNES	}		Date:	18/05/2017	311C	
Components (includ	ng series and familie	s) submitted for Ex	tension of Qu	alification	Approval:				11
ESCC COMPONENT NO.	VARIANTS	RANGE (OF COMPON	MPONENTS BASED ON			TEST EHICLE / S	COMPONENT SIMILAR	r
5101/027	07, 08	LCC2D			1N6640U	33127	7004YB		
5101/026	07, 08	LCC2D			1N6642U	33125	5192VZ		
					<u> </u>				
Component M	anufacturer	2 Locatio	n of Manufac	turing Plan	(s) 3				4
STMicroelectronics		3, rue de Sui	sse BP4199,	35041 Ren	nes Cedex	Date of origin Date: Certificate Re	nal qualification appro 02/05/2011 ef No. 311	val:	
		5		-	6				7
ESCC Specifications	used for	Deviations to	LVT testing	and Detail			Extension Report		-
Maintenance of qual Generic: 5000			used: reference and date:					h-dE4 20/02/20	147
Generic: 5000	Issue: 6	No ⊠	Yes 🗆	(supply of	letails in Box	ID33127004 ID33125192	VZ_1N6642U01D_C	nanr4 - 29/03/20 nartF4 - 7/12/2015	5
Detail(s): 5101/02		Deviation fro	m current Sp	ecifications	i				
5101/02	.6 3	No 🖂	Vos 🗆	(Cumple	datails\				
		No ⊠	Yes 🗆	(Supply	uetalis)				
									8
Summary of procure	ment or equivalent te	st results during cu	urrent validity	period in s	upport of this ap	plication (those	e to ESCC listed first)	8	
Project Name	Testing Lev	el L	AT		Date code		Quantity De	livered	
Sale details in annex	(
PID changes since s	tart of qualification		9 Cu	rrent PID	Varified by:		CNES		10
None	tart or qualification		_ = Cu	neill FID	vermed by.	Name of	Excutive Representa	tive	_ 10
Minor* ⊠			Re	f No:	8097046 (gener		8170379 (specific Di		v16
Major* □	*Provide details in b	oox.		ue:		,,	Date:	12/01/2015	
_	T TOVIGO GOLGIJO III D		Re	v Date:					
				***************************************					11
Current Manufacturi	ng facilities surveyed	by:		ESA & CNE	ES	on	31/08	/2016	
		-	(Name of E	xecutive R	epresentative)	_	(Da	ate)	
Satisfactory:	Yes ⊠	No 🗆	Explain						
Report Reference:	CNES DCT_AQ_CQ_ AUDIT-2016)	_2016_13092 (ST-	_						

Component tille: Rectifier Diodes based on types 1N6640U and 1N6642U Appl. No. Secretive Member: CNES Date: 18/05/2017 311C 12 allure Analysis, DPA, NCCS available: Yee No Si (Supply data) If No's and purposes: If we undersigned hereby certifies on behalf of the ESCC Executive - 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 VES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein. JP. BUSSENOT (Signature of the Executive Coordinator) Intimuation of Boxes above:
aillure Analysis, DPA, NCCS available: Yes No (Supply data) ef. No's and purposes: the undersigned hereby certifies on behalf of the ESCC Executive - that the above information is correct; - at 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 NES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein. The Bussenot (Signature of the Executive Coordinator)
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(Signature of the Executive Coordinator)
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Section 1	ESCC
ALCON NO.	189A

Component title:

Rectifier Diodes based on types 1N6640U and 1N6642U

Date: 18/05/2017

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Executive Member: CNES

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Non com	pliance to ESCC requirements:			15
No.:	Specification	Paragraph	Non compliance	
		1		
Additiona	I tacks required to achieve full compliance for	ESCC qualification or rationale for acceptability	of	1
noncomp	liance:	ESCC qualification or rationale for acceptability	oi.	16
Executive	Manager Disposition			17
Application	on Approval: Yes No			
Action / F	Remarks:			
			- ()	
			ACH	
Date:			Signature, ESA Representative	
	*			

Component Title: Rectifier Diodes based on types 1N6640U and 1N6642U

Executive Member: CNES Date: 18/05/2017

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

Tests conducted in compliance with:

ESCC 5000 generic specification; Chart F4 (for ESCC/QPL parts); or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

1N6640U01D Lot ID33127004YB DC1623A	Full Chart F4	
1N6642U01D Lot ID33125192 DC1524A	Full Chart F4	

Detail Specification reference:

Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	N° of Rejects	Comments if not performed Comments on Rejection
	Mechanical shock	×	MIL-STD-750 TM2016	1623A 1524A	15 + 15	0	
	Vibration	⊠	MIL-STD-750 TM2056	1623A 1524A	15 + 15	0	
	Constant acceleration	⊠	MIL-STD-750 TM2006	1623A 1524A	15 + 15	0	
group	Seal Fine leak Gross leak	⊠	MIL-STD-750 TM1071	1623A 1524A	15 + 15	0	
cal Sub	Electrical Measurement	Ø	Intermediate and End- Point Electrical Measurements	1623A 1524A	15 + 15	0	
hanie	External Visual	⊠	ESCC Basic Spec 20500	1623A 1524A	15 + 15	0	
al/Mec	Thermal shock		MIL-STD-750 TM1056	Click here to enter text.			Only applicable to axial lea glass diodes
Environmental/Mechanical Subgroup	Temperature Cycling	⊠	MIL-STD-750 TM1051	1623A 1524A	15 + 15	0	
	Moisture Resistance	⊠	MIL-STD-750 TM1021	1623A 1524A	15 + 15	0	
	Seal Fine leak Gross leak	⊠	MIL-STD-750 TM1071	1623A 1524A	15 + 15	0	
	Electrical Measurement	×	Intermediate and End- Point Electrical Measurements	1623A 1524A	15 + 15	0	
	External Visual	⊠	ESCC Basic Spec 20500	1623A 1524A	15 + 15	0	
	Operating Life	⊠	ESCC 5000 Para. 8.19	1623A 1524A	15 + 15	0	
Endurance Subgroup	Electrical Measurement	⊠	Intermediate and End- Point Electrical Measurements	1623A 1524A	15 + 15	0	
Endu	Seal Fine leak Gross leak	×	MIL-STD-750 TM1071	1623A 1524A	15 + 15	0	
	External Visual Inspection	⊠	ESCC Basic Spec 20500	1623A 1524A	15 + 15	0	
\$ 4 9	Permanence of Marking		ESCC Basic Spec 24800				Not applicable on Laser marking
	Terminal Strength	×	ESCC 5000 Para, 8.18	1623A 1524A	5 + 5	0	
Assembly Capability Subgroup	Internal Visual	⊠	ESCC Basic Spec 20400	1623A 1524A	5 + 5	0	
S S S	Bond Strength	⊠	MIL-STD-750 TM 2037	1623A 1524A	3+3	0	
	Die Shear	×	MIL-STD-750 TM 2017	1623A 1524A	3 + 3	0	

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Rectifier Diodes based on types 1N6640U and 1N6642U Component title:

Executive Member: CNES Date: 18/05/2017

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Test Tick when done Conditions Date Code Diffusion Lot Performed. Test Tick when done Conditions Diffusion Lot Performed. Test Tick when Conditions Diffusion Cly Rejects Comments on Reject Comments on	AND L	A.	Executi	Executive Member: CNES			Date: 18/05/2017 311			
Tests	Ch art F4	Test	Tick when done	Conditions	Code Diffusion	Tested Qty	N° of Rejects	Comm peri Comments of	ents if not formed. on Rejection	
	<u>a</u>									
	Test									
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Component title:

Rectifier Diodes based on types 1N6640U and 1N6642U

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311C

Executive Member: CNES

S Date: 18/05/2017

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

NOTE	ES 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.