

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: RESISTO

RESISTOR, FIXED, SURFACE MOUNT, THIN FILM, NONHERMETICALLY SEALED BASED ON TYPE TNPS

Executive Member: DLR Date: 18/11/2019

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COMPONENT NO. 4001/029	VARIANTS	8	RANG								4.00
	1_3		10.00	GE OF CO	MPONENTS	BASED ON			TEST VEHICLE / S	S COMPONENT S SIMILAR	
	1 1-9	1-3 all TNPS 060		0603	4	1001/029-01					
						TNPS	0805	4	1001/029-02		
	ĺ					TNPS	1206	4	4001/029-03		
	ļ = = -										
Component N	 Manufacturer	2	Loc	cation of Ma	anufacturing Plan	nt(s)	3				
/ishay Electronic G	mbH		DrFelix-Zandman-Platz 1					Date of original qualification approval:			
			Germany					Date:	01/05/2009		
								Certifica	ate Ref No. 289		
		5					6			The second secon	
ESCC Specification Maintenance of qua							Qualification Extension Report reference and date:				
Generic: 4001	. 351	4	No ⊠	Yes	(supply	details in I	Зох	Report	Periodic tests		
Detail(s): 4001 / 029 Issue: 3			Deviation from current Specifications:				21.05.2019				
			No ⊠	Yes	☐ (Supply	details)		21.00.2			
			esults durin		ralidity period in			plication (those to ESCC listed		
Project Name	Testing L	evei		LAT		Date cod	е	Se	ee attached files:	ty Delivered	
								20 Lis	18	Period May 2017 to Apr Period May 2018 to Apr	
								20			
PID changes since	start of qualification	1		9	Current PID	Verified b	y:		DLR		1
None					D.(N.	DID 4454			ne of Agency Represe	entative	
Minor* ⊠ Major* □ *Provide details in box:			Ref No: PID 145455 ES Issue: 5			Date: 30/11/2018					
Wajor ==	Annex 2 – box 1				Rev Date:	15/11/20	19				_
Current Manufactuu	ing facilities survey	red by:			DLR			on	9	26/06/2019	_ •
Junem Manufactur	my racinites survey	ou by.	3	(Nan	ne of Agency Re	presentativ	/e)			(Date)	
Satisfactory:	Yes ⊠		No		xplain					*	
	.50 2		12.49		gree-Takk						
Report Reference:	VIS-AUD-20	N1Q									

ESCC

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Failure Analysis, DPA, NCCS available: Yes □ No ☒ (Supply data)
Def Ale's and numerous
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: 18/11/2019i. A. Burak Gökgöz
(Signature of the Executive Coordinator)
Continuation of Boxes above: 14
Box 5: The Change of ESCC 4001 from Index 4 to Index 5 is included in PID Issue 5, and had no impact on MoQ-Testing.

ESCC

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Non compliance to ESCC requirements:						
No.:	Specification	Paragraph	Non compliance			
Additiona	It asks required to achieve full compliance for	ESCC qualification or rationale for acceptability	of	1.0		
noncomp	liance:			16		
Executive	e Manager Disposition			17		
Action / F	on Approval: Yes No Remarks:		3. D1			
Date:			B. Schade: Head of ESA Product Assurance	e		



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

Tests conducted in compliance with:

ESCC 4001 generic specification; Chart F4 (for ESCC/QPL parts);

or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

TNPS0603 38R3 B2, 19K6 B2, 150K B1 TNPS0805 243R B2, 100K F3, 332K F3
TNPS1206 84R5 F3, 97K6 F3, 511K B1

Detail Specification reference: ESCC 4001-029, Issue 3

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
Environmental Mechanical Subgroup	Mounting	⊠	IEC 60115-1 clause 4.31		45	0	
	Rapid Change Of Temperature	⊠	IEC 60068-2-14		45	0	
	Vibration	×	IEC 60068-2-6		45	0	111111111111111111111111111111111111111
	Climatic test Sequence	⊠	ESCC 4001, Para 8.10		45	0	
	Seal Test	0	IEC 60068-2-17		N/A		
	Mounting	⊠	IEC 60115-1 clause 4.31		18	0	
	Robustness of Terminations	⊠	IEC 60068-2-21		18	0	
	Climatic test Sequence	⊠	ESCC 4001, Para 8.10		18	0	
I /Me	Seal Test		IEC 60068-2-17		N/A		
nenta	Resistance to Soldering Heat	⊠	IEC 60068-2-20		18	0	
viron	Mounting	⊠	IEC 60115-1 clause 4.31		18	0	
ā.	Climatic test Sequence	⊠	ESCC 4001, Para 8.10		18	0	
	Seal Test		IEC 60068-2-17		N/A		
	Mounting		IEC 60115-1 clause 4.31		N/A		
	Insulation Resistance	⊠	ESCC 4001, Para 8.3.1.2		45	0	
	Voltage Proof	⊠	ESCC 4001, Para 8.3.1.3		45	0	
Endurance Subgroup	Mounting	Ø	IEC 60115-1 clause 4.31		45	0	
	Operating Life	⊠	ESCC 4001, Para 8.13		45	0	
	Seal Test		IEC 60068-2-17		N/A		,,,,,,
Assembly Capability Subgroup	Solderability	Ø	IEC 60068-2-20		18	0	
	Permanence of marking	⊠	ESCC 24800		18	0	
	Operating Life		ESCC 4001, Para 8.13		N/A		Failure Rate Endurance Testing (8000h) not requested
	Seal Test		IEC 60068-2-17		NA		() narragasora
Additional Tests							

Remark: Tested Quantity of 45 pieces refers to 3 component types of 3 different R-values (low, medium high) = 9 test lots with 5 pieces tested per test lot. Tested Quantity of 18 pieces refers to 3 component types of 3 different R-values (low, medium high) = 9 test lots with 2 pieces tested per test lot.



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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.
	Box 22	Additional Comments.
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