

Capacitors, Leadless Surface Mounted, Tantalum, Solid electrolyte, Low equivalent series resistance based on type TES. Component Title:

Executive Member: ESA Date: 29/09/2025

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Components (inclu	iding series and families)	submitted for Ext	ension	of Qualification	on A	Approval:					1
ESCC COMPONENT NO.	VARIANTS	RANGE C	F COM	MPONENTS			SED ON		TEST VEHICLE / S	COMPONE SIMILAR	
3012/004	01 A - G16	A - G16 ESCC 3012/004, issu			ue 7 – page 7 TES				See box 14	All other variants values.	and
	02 B - G16 1uF-470uF, 6V -50V					Ì					
	03 C - P17					ĺ					
	04 D - P17										
	05 E - P17										
Component KYOCERA AVX C	Location Dvorakova 32 Lanskroun Czech Republ	8	nufacturing Pl	lant((s) [3	Date	of original qualification and the control of the co	approval:	4	
ESCC Specificatio Maintenance of qu Generic: 3012 Detail(s): 3012/	used: No 🗵 `	No ⊠ Yes ☐ (supply details in Box 15) Deviation from current Specifications: Extension of Valid Qualification, Customer Interpretation of Valid Qualification of Valid Qualificatio						on, Customer Informa	7 ation		
Summary of procu Project Name See box 22	rement or equivalent test Testing Level	results during cur LA		alidity period in		ipport of th	iis ap	plicatio		first) ty Delivered	8
PID changes since None □ Minor* ⋈ Major* □	*Provide details in boy New issue of PID100 and PIG sent to ESA before the exten approval. Changes: • new ESCC Deputy Chief	0100/004 Proposal has sion of the qualification		Current PIC Ref No: Issue: Rev Date:	9	Verified by: Ad1) PID1(O under ap 29.9.2025	00, A	d2) PII	Jame of Excutive Repres D 100/004 Date		10
	Trew Lasco Deputy officer Organisation – managem ESCC Documents – issu Production Flow Chart – Production matrix extens	ent update e update update									
Current Manufacturing facilities surveyed by: (Na				ESA e of Executive		presentati	ve)	or	n	(Date)	11
Satisfactory:	Yes 🗆	No 🗆	Ex	plain							
Report Reference:			_								

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Page 2 Component title: Capacitors, Leadless Surface Mounted, Tantalum, Solid electrolyte, Appl. No. Low equivalent series resistance based on type TES. Executive Member: 29/09/2025 327F 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 ESA as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein. Digitally signed by Denis Denis Lacombe Lacombe Date: 2025.11.03 09:40:07 Date: (Signature of the Executive Coordinator) +01'00' Continuation of Boxes above: 14 Selection of codes was based on: Coverage of different case sizes 0 Coverage wide range of voltage Coverage different capacitances and used powders Purchased units from last re-qualification Selected codes: A4,7/16 - 301200401475KC2000 A4,//16 - 301200401475KC22000 B1/50 - 301200402105KT2000 C10/25 - 301200403106KE0600 D47/20 - 301200404476KD0055 E470/6,3 - 301200405477KJ0030 E10/50 - 301200405106KT0120



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Non com	pliance to ESCC_requirements:			
No.:	Specification	Paragraph	Non compliance	
Additiona	l tasks required to achieve full compliance for	ESCC qualification or rationale for acceptability	of	16
noncomp	liance:			
				1
Executive	e Manager Disposition			17
Application	on Approval: Yes ⊠ No □			
Action / F	nemarks:			
			Al. Zadh	
	31 October 2025		Alli Cadem	
Date:	51 October 2023		, , , , , , , , , , , , , , , , , , ,	_
			A. Zadeh Head of the Avionics and EEE Division	on



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

Tests conducted in compliance with:

ESCC 3012 generic specification; Chart V (for ESCC/QPL parts); Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

Detail Specification reference: 3012/004

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
dn	Mounting		IEC 60384-1	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Environmental / Mechanical Subgroup Group 1A	Robustness of Terminations	\boxtimes	ESCC 3012 issue 5, Para. 8.9	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
ıvironmental / Me Grou	External Visual Inspection	\boxtimes	ESCC 20500	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Ш	Climatic Sequence		ESCC 3012 issue 5, Para. 8.10	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Subgroup	Mounting	×	IEC 60384-1	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Environmental / Mechanical Subgroup Group 1B	Rapid Change of Temperature	\boxtimes	ESCC 3012 issue 5, Para. 8.2 IEC 60068-2-14	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Environme	Vibration	\boxtimes	ESCC 3012 issue 5, Para. 8.11 IEC 60068-2-6	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	

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	Mechanical Shock	\boxtimes	ESCC 3012 issue 5, Para. 8.12 IEC 60068-2-27	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
	External Visual Inspection		ESCC 20500	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
	Climatic Sequence		ESCC 3012 issue 5, Para. 8.10	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
	Mounting		IEC 60384-1	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Subgroup	High and Low Temperature Stability		ESCC 3012 issue 5, 8.13	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Environmental / Mechanical Subgroup Group 1C	Surge Voltage	\boxtimes	ESCC 3012 issue 5, 8.14	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Environmer	Damp Heat, Steady State	\boxtimes	ESCC 3012 issue 5, 8.15 IEC 60068-2-78	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
	External Visual Inspection	\boxtimes	ESCC 20500	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
(0	Mounting		IEC 60384-1	A2505 B2449 C2449 D2505 E2449	16x5	0	
Endurance Subgroup Group 2B (Operating life at 85 °C)	Operating Life at 85°C	×	ESCC 3012 issue 5, Para. 8.16(b)	A2505 B2449 C2449 D2505 E2449	16x5	0	
Endurance oup 2B (Opera	Intermediate and Final Measurements	\boxtimes	ESCC 3012 issue 5, Para. 8.16(a) ESCC 3012/004 issue 7, Para. 2.4	A2505 B2449 C2449 D2505 E2449	16x5	0	
g	External Visual Inspection		ESCC 20500	A2505 B2449 C2449 D2505 E2449	16x5	0	

	Mounting	\boxtimes	IEC 60384-1	E2505	36	0	
Endurance Subgroup Group 2A (Operating life at 85 °C)	Operating Life at 85 °C	Ø	ESCC 3012 issue 5, Para. 8.16(a)	E2505	36	0	
	Intermediate and Final Measurements	⊠	ESCC 3012 issue 5, Para. 8.16(a) ESCC 3012/004 issue 7, Para. 2.4	E2505	36	0	
	External Visual Inspection		ESCC 20500	E2505	36	0	
	Mounting	\boxtimes	IEC 60384-1	E2505	24	0	
Endurance Subgroup Group 2A (Operating life at 125 °C)	Operating Life at 125 °C	Ø	ESCC 3012 issue 5, Para. 8.16(a)	E2505	24	0	
	Intermediate and Final Measurements	⊠	ESCC 3012 issue 5, Para. 8.16(a) ESCC 3012/004 issue 7, Para. 2.4	E2505	24	0	
Group	External Visual Inspection	Ø	ESCC 20500	E2505	24	0	



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Capability roup up 3	Permanence of Marking		ESCC 24800	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	
Assembly (Subgr	Solderability	\boxtimes	IEC 60068-2-20 ESCC 3012 issue 5, Para. 8.18	A2505 B2449 C2449 D2505 E2449 E2505	4x6	0	



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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.