
		<b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b>			Page 1
Component Title: Resistors, Fixed, Chip, Thick Film, based on type CHPHR and CHPFR		Executive Member: CNES			Date: 05/10/2017
					Appl. No. 314C
Components (including series and families) submitted for Extension of Qualification Approval:					1
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
4001/026	01 & 06 02 & 07 03 & 08	All values 50V to 500V	CHPHR0603 - CHPHR0805 - CHPHR1206	4001026015604G4 4001026061000F4 4001026026194G4 40010260251R1F4 4001026084753F4	
	04 & 09 05 & 10		CHPHR2010 - CHPHR2512	4001026045624G4 4001026043902F4 40010260551R0F4 4001026052R49G6	
	11 & 16 12 & 17 13 & 18		CHPFR0603 CHPFR0805 CHPFR1206	) ) ) See box 14	
	14 & 19 15 & 20		CHPFR2010 CHPFR2512	) )	
Component Manufacturer VISHAY SA Division SERNICE		Location of Manufacturing Plant(s) 199 Bld de la Madeleine BP 1159 06003 NICE CEDEX 1 - France		Date of original qualification approval: Date: 11/10/2011  Certificate Ref No. 314	
ESCC Specifications used for Maintenance of qualification testing: Generic: 4001 Issue: 4  Detail(s): 4001026 Issue: 6		Deviations to LVT testing and Detail Specification used: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (supply details in Box 15)  Deviation from current Specifications: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details)		Qualification Extension Report reference and date: Report CAZ/17.001, September 2017	
Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)					
Project Name	Testing Level	LAT	Date code	Quantity Delivered	
See report CAZ/17.001	-	2	1713 (CHPHR0805)	150	
		2	1635 (CHP2010 R0055) 1719 (HCHP0603 R0055)	25 250	
				Total CHP HR 110 000 CHP FR 0	
PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:		Current PID Verified by: CNES Name of Executive Representative  Ref No: PID CHP HR FR Issue: 5 Date: 05/10/2017 Rev Date: 11/09/2017			
Current Manufacturing facilities surveyed by: ESA and CNES on 01/02/2017 (Name of Executive Representative) (Date)					
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain					
Report Reference: CNES DCT/AQ/CQ-2017/02072, 03/02/2017					

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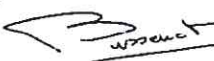
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Failure Analysis, DPA, NCCS available:    Yes    ☐    No    ☒    (Supply data)

Ref. No's and purposes:

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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 CNES 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)

Date: 05/10/2017

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Continuation of Boxes above:

Report 17 09 101, 27/02/2017

Failure Rate Endurance Testing subgroup of Chart F4 performed on 16 test vehicles (8 000 hours completed) ;

CHPFR0603, None

CHPFR0805, 10k - 24,3k - 180k - 4,7M

CHPFR1206, 10 - 681 - 15k - 20k - 681k

CHPFR2010, 100 - 4,99k - 27k - 10M

CHPFR2512, 4,7 - 62k - 90k

30, 40 or 60 parts for each lot.

Failure Rate Endurance Testing subgroup of Chart F4 performed on 3 test vehicles (4 000 hours completed) ;

CHPFR0603, 470 - 9,09K - 147k

20 parts for each lot.

Failure Rate Endurance Testing subgroup of Chart F4 performed on 10 test vehicles (2 000 hours completed) ;

CHPFR0603, 47k



CHPFR0805, 22 - 36k

CHPFR1206, 1,27M

CHPFR2010, 6,04 - 22,1 - 100k

CHPFR2512, 20 - 24,9k - 1M

20 parts for each lot.

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		Component title:    Resistors, Fixed, Chip, Thick Film, based on type CHPHR and CHPFR Executive Member:    CNES		Appl. No.  314C
		Date:    05/10/2017		15
Non compliance to ESCC requirements:				
No.:	Specification	Paragraph	Non compliance	
Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:				16
Executive Manager Disposition				17
Application Approval:    Yes <input type="checkbox"/> No <input type="checkbox"/> Action / Remarks:				
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div>Date:</div> <div style="text-align: right;">             Signature, ESA Representative         </div> </div>				



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

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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:

4001026015604G4 5,6MOhm DC 1635 (0603)	4001026026194G4 6,19MOhm DC 1637 (0805)
4001026061000F4 100Ohm DC 1701 (0603, G)	40010260251R1F4 51,1Ohm DC 1709 (0805)
4001026084753F4 475KOhm DC 1637 (1206, G)	
4001026045624G4 5,62MOhm DC 1552 (2010)	40010260551R0F4 51Ohm DC 1606 (2512)
4001026043902F4 39KOhm DC 1601 (2010)	4001026052R49G6 2,49Ohm DC 1707 (2512)

Detail Specification reference: 4001/026

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	<input checked="" type="checkbox"/>	IEC 60115-1 clause 4.31	All but 1637	2 x 8 6 x 5	0	
	Rapid Change Of Temperature	<input checked="" type="checkbox"/>	IEC 60068-2-14	All but 1637	2 x 8 6 x 5	0	
	Vibration	<input type="checkbox"/>	IEC 60068-2-6				NA
	Climatic test Sequence	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.10	All but 1637	2 x 8 6 x 5	0	
	Seal Test	<input type="checkbox"/>	IEC 60068-2-17				NA
	Mounting	<input checked="" type="checkbox"/>	IEC 60115-1 clause 4.31	All	8 x 2	0	
	Robustness of Terminations	<input checked="" type="checkbox"/>	IEC 60068-2-21	All	8 x 2	0	
	Climatic test Sequence	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.10	All	8 x 2	0	
	Seal Test	<input type="checkbox"/>	IEC 60068-2-17				NA
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	IEC 60068-2-20	All	8 x 2	0	
	Mounting	<input checked="" type="checkbox"/>	IEC 60115-1 clause 4.31	All	8 x 2	0	
	Climatic test Sequence	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.10	All	8 x 2	0	
	Seal Test	<input type="checkbox"/>	IEC 60068-2-17				NA
	Mounting	<input type="checkbox"/>	IEC 60115-1 clause 4.31				NA
	Insulation Resistance	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.3.1.2	All	8 x 5		
	Voltage Proof	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.3.1.3	All	8 x 5		
Endurance Subgroup	Mounting	<input type="checkbox"/>	IEC 60115-1 clause 4.31				Not performed
	Operating Life	<input type="checkbox"/>	ESCC 4001, Para 8.13				Replaced with FR data
	Seal Test	<input type="checkbox"/>	IEC 60068-2-17				
Assembly Capability Subgroup	Solderability	<input checked="" type="checkbox"/>	IEC 60068-2-20	All	8 x 2		
	Permanence of marking	<input type="checkbox"/>	ESCC 24800				NA
Failure Rate Subgroup	Operating Life 8 000 h	<input checked="" type="checkbox"/>	ESCC 4001, Para 8.13	33 lots	23 x 40 3 x 60 7 x 90		11,3 M components.hours
	Seal Test	<input type="checkbox"/>	IEC 60068-2-17				NA
Additional Tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					

