

		APPLICATION FOR ESCC TECHNOLOGY FLOW QUALIFICATION			Page 1
		Component Title: Transistors, Microwave, GaN Hemt, Unmatched Power Bar in Metal Ceramic Package CHKxxxx-SYx Executive Member: CNES Date: 19/01/2024			Appl. No. 388
Technology Flow submitted for qualification					1
Summary Description of Technology flow	Detailed Technology Flow Description No.	BASED On Technology	Test Structures	Components Proposed for Qualification	
Attached as Appendix	-	GH50-20	CHK8101-SYC	CHK8101-SYC	
			CHKA012bSYA	CHK8201-SYA	
				CHKA012b-SYA	
Component Manufacturer United Monolithic Semiconductors	2	Location of Manufacturing Plant 3 WAFER FABRICATION: UMS Gmbh Wilhelm Runge Strasse 11 D-089081 Ulm Germany DIE ASSEMBLY: RHe Microsystems Gmbh Heidestrass 70 01454 Radeberg Germany CONTROL AND TEST: UMS SAS 10 avenue du Quebec 91140 Villebon sur Yvette France	ESCC Specification used for Qualification 4 Generic: ESCC 5010 Issue 3 Detail/s: ESCC 5614/009 Issue 1		
Qualification Report Reference and date: See Box 12	5	PID used for manufacturing Qualification Lot 6 Ref No: 30S_RD_PID_GaN Power in metal Ceramic Package CHKxxxx-SYx Product family Issue: 03 Date: 04/12/2023		Date:	
PID changes since Original Qualification or last extension of Qualification. None <input checked="" type="checkbox"/> Minor* <input type="checkbox"/> Major* <input type="checkbox"/> *Provide detail QUR 723 refers	7	Current PID Verified by: J.L. Roux (CNES) Name of Executive Representative Ref No: 30S_RD_PID_GaN Power in metal Ceramic Package CHKxxxx-SYx Product family Issue: 03 Date: 07/12/2023		8	
Current Manufacturing facilities surveyed by: A. Barnes, ESA / JL Roux, CNES on 03/10/2023 (Name of Executive Responsible) (Date) Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Corrective Actions closed out Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>					9
Quality and Reliability Data Evaluation testing performed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Report Ref. No.: See Box 12 Date: Equivalent Data: Certification:	Failure analysis, DPA, NCCS available Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (supply data) Ref. Nos. and purpose:				10



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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.

Date: 19/01/2024

Gianandrea Quadri
G. Quadri, CNES

((Signature of the Executive Coordinator))

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Continuation of Boxes above:

Box 5 and 10 :

ESA-TECE-LAB-TR-02492 (28/09/2021) : Multipactor and Corona tests on 4 packaged GaN Power Transistors at L-band
NE_10S_LAT_Report_CHK8201-SYA_P101221 Rev. A (30/03/2022): Lot Acceptance Test report on CHK8201-SYA
NE_10S_LAT_Report_CHKA012vSYA Rev. A (15/02/2023): Lot Acceptance Test report on CHKA012bSYA
NE_10S_GH50-20_SEE_Radiation_Test_Plan_Results
NE_10S_Great2_TN6_Capability_Approval_Test_Results
G2P31_UMS_TN5A Rev. B (18/04/2023) : Technical Note 5A- Definition of Capability Approval Domain
G2P31_UMS_TN6A Rev. A (09/06/2023) : Technical Note 6- Capability Approval Test Results
ESA-TECQEC-LAB-TR-2023-003545 Issue 1 (27/11/2023) : CA on power GaN transistors from UMS

Box 9 : Five (5) Findings from the audit have been identified. These findings do not pertain to general reliability issues. Consequently, they do not necessitate any actions that would impact the manufacturing or testing of the domain intended for qualification.



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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:

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N/A

Executive Manager Disposition

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Application Approval: Yes No

Action / Remarks:

Date:

B. Schade: Head of the Product Assurance and Safety Department