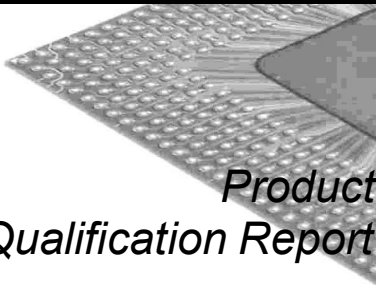


Product Qualification Report



Document ID:	4486_192	 <i>Product Qualification Report</i>
Revision:	1.0	
Date:	2023-02-09	
Author:	Gary Chen	
Classification:	CONFIDENTIAL	

Project	4486 - Sheliak
Product:	nRF7002-QFAA Build code B00
Title:	Product Qualification Report for nRF7002-QFAA

Product Description

KEY FEATURES

- Refer to nRF7002-QFAA Product Specification

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Product Qualification Report

1. Document Control

1.1. Revision History

Rev	Rev. Date	Document Status	Responsible
1.0	2023-02-09	First version	Gary Chen

1.2. Modifications since Last Revision

- N/A

2. Qualification Tests and Results

Test	Test identification	Referencing standard	Test Conditions	Units			Qualification level ¹ Die/Package	Comment
				Lots	S.S.	Total		
Accelerated Environment Stress Tests								
1	MSL preconditioning	JESD22-A113	Level: MSL2 @ 260°C / 3*reflow	3	77	231	B/A	PASS
2	Unbiased HAST	JESD22-A118	Temp: 110 °C Humidity: 85% RH Duration: 264 hours	3	77	231	B/A	PASS
3	TC	JESD22-A104	Temp: -65°C to +150°C Duration: 500 cycles	3	77	231	B/A	PASS
4	HTS	JESD22-A103	Temp: 150°C Duration: 1000 hours (read-out 500h)	3	77	231	B/A	PASS
5	Biased HAST	JESD22-A110	Temp: 110 °C Humidity: 85% RH Duration: 264 hours Vccmax	3	77	231	B/A	PASS
Package Assembly Integrity Tests								

¹ Qualification Level Coding:

Test Vehicle	Level
Current version of die/package	A
Previous version of die/package	B
Variant of die/package, same technology	C
Similar and relevant die/package/technology	D
Not relevant	X

Product Qualification Report

Test	Test identification	Referencing standard	Test Conditions	Units			Qualification level ¹ Die/Package	Comment
				Lots	S.S.	Total		
6	EV - External Visual	Supplier Specification		3	10	30	B/A	PASS
7	PD - Physical Dimensions	Supplier Specification		3	20	60	B/A	PASS
8	BS - Ball Shear	JESD22-B116		3	10X5 balls	150	B/A	PASS
9	BPS - Bond (Wire) Pull Strength	Supplier Specification M2011		3	36x5 wires	150	B/A	PASS
10	SD - Solderability	JESD22-B102		3	5 units	15	B/A	PASS
Accelerated Lifetime Simulation Tests								
11	HTOL	JESD22-A108, JESD85	1.1*Vccmax, Temperature 125°C 1000hrs	3	77	231	B/A	PASS FIT: 51 (60% CL)
12	ELFR	JESD74	1.1*Vccmax, Temperature 125°C 48hrs	3	1000	3000	B/A	PASS FIT: 278(60% CL)
Electrical Verification Tests								
13	ESD Sensitivity Testing	JS-001	HBM	3	3x20 pin groups	180	B/A	PASS 750V
		JESD22-C101	CDM	3	3	9	B/A	PASS 1kV
14	LU	JESD78	High pass: 100mA Class: II (+85°C)	3	3+3	6	B/A	PASS

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Test	Test identification	Referencing standard	Test Conditions	Units			Qualification level ¹ Die/Package	Comment
				Lots	S.S.	Total		
15	ED	JESD86	All combinations of Vmin,typ,max AND Tmin, typ,max TT,FF,SS	3	10	30	B/A	PASS
Die Fabrication Reliability Tests								
16	HCI, EM, TDDb, SM, NBTI	Supplier Specification					D/X	Supplier Quarterly Reliability Monitoring Available
Compliance tests								
17	HSR – Hazardous Substance Analysis	Nordic Specification	RoHS, “Halogen free”	1	20g		A/A	PASS
18	Tele regulatory standards	CE		N.A.	N.A.	N.A.	B/A	PASS using nRF7002 DK

Table 1: Qualification results

3. Conclusion

The nRF7002-QFAA B00 is ready for transfer to production.