



Active Second Source Final Test Melexis Sofia [MLX81107&MLX81109]

Melexis PCN Team

1. Product Change Notification basic data			
1.1 Company	Site submitting the change: Melexis Erfurt		
	Affected sites: Melexis Erfurt & Melexis Sofia		
1.2 PCN No.	MCM-15757		
1.3 Title of PCN	Active Second Source Final Test Sofia: MLX81107 & MLX81109		
1.4 Product Category	Active Components - Integrated Circuits		
1.5 Issue date	2022-10-28		
2. PCN Team			
2.1.1 Name	Lisa Vanheerswynghels		
2.1.2 Phone	+32 57 22 62 07		
2.1.3 Email	pcn_mlx@melexis.com		
3. Changes			
No.	3.0 Ident	3.1 Category	3.2 Type of change
#1	SEM-TF-01	TEST FLOW	Move of all or part of electrical wafer test and/or final test to a different test site.
4. Description of change			
	Old	New	
Electrical Final Test location:	Melexis Erfurt, Germany	Melexis Erfurt, Germany + Melexis Sofia, Bulgaria	
4.1 Anticipated impact:	No impact on fit, form or function		
4.2 Anticipated impact on order code	No impact, current order codes remain valid		
5. Reason / motivation for change			
5.1 Motivation	As a responsible and future oriented player, Melexis is protecting it's customers. This includes to secure the supply chain against environmental and/or material based events (contingency plan). The increase in business leads to demand beyond Melexis Erfurt capability.		
6. Marking of parts / traceability of change			
6.1 Description	No change in part marking. Traceability ensured by lot number and datecode through the Melexis ERP system.		
7. Timing / schedule			

<b>7.1 Date of qualification results</b>	Available	
<b>7.4 Intended start of delivery</b>	November 2022	Date can shift depending on customer approval.
<b>7.5 Qualification samples available?</b>	Not applicable	Samples can be requested through pcn_mlx@melexis.com
<b>7.6 Customer feedback required by:</b>	04-Nov-2022	Please provide your initial feedback through the 'Customer Feedback' sheet as acknowledgement

<b>8. Qualification / validation</b>		
<b>8.1 Description</b>	ZVEI Delta Qualification Matrix and AEC-Q100. See point 10. [Attachments]	
<b>8.2 Qualification report and qualification results</b>	Available (see attachment)	

<b>9. Input to customer for risk assessment process</b>		
<p>The same equipment and testing is used in both qualified production sites, therefore Melexis see no risk.</p> <p>Test hardware at Melexis 'Melexis Sofia' is identical to current used equipment. Test software is identical to the current software</p> <p>Logistic control will be done unchanged by Melexis. Final tests flow on device level will remain unchanged. Same test routing is used as the current released site. The routing is fixed by the Oracle system, no risk of escape. Manufacturing and BOM [Bill of Material] remains unchanged.</p>		

<b>10. Attachments (e.g. new datasheet, additional docs, photos, process flow, sample plan, ...)</b>		
<p>Active Second Source Final Test Melexis Sofia [MLX81107&amp;MLX81109]  CPK_811079.pdf  RnR_811079.pdf  390068110701M011_rev12.XLS</p>		

<b>11. Affected parts</b>		
<b>11.1.2 Supplier Part Name</b>	<b>11.1.4 Package Name</b>	<b>11.2.6 Additional Part Information</b>
MLX81107KLW-CAE-100-RE	QFN_WF20 5x5 GR	N/A
MLX81109KLW-CAE-100-RE	QFN_WF20 5x5 GR	N/A



Part 1: SITUATIONAL OVERVIEW

Part 2: QUALIFICATION STRATEGY

Part 3: KEY MILESTONES

**Melexis**  
INSPIRED ENGINEERING

SENSE&DRIVE  
by Melexis

SENSELIGHT  
by Melexis



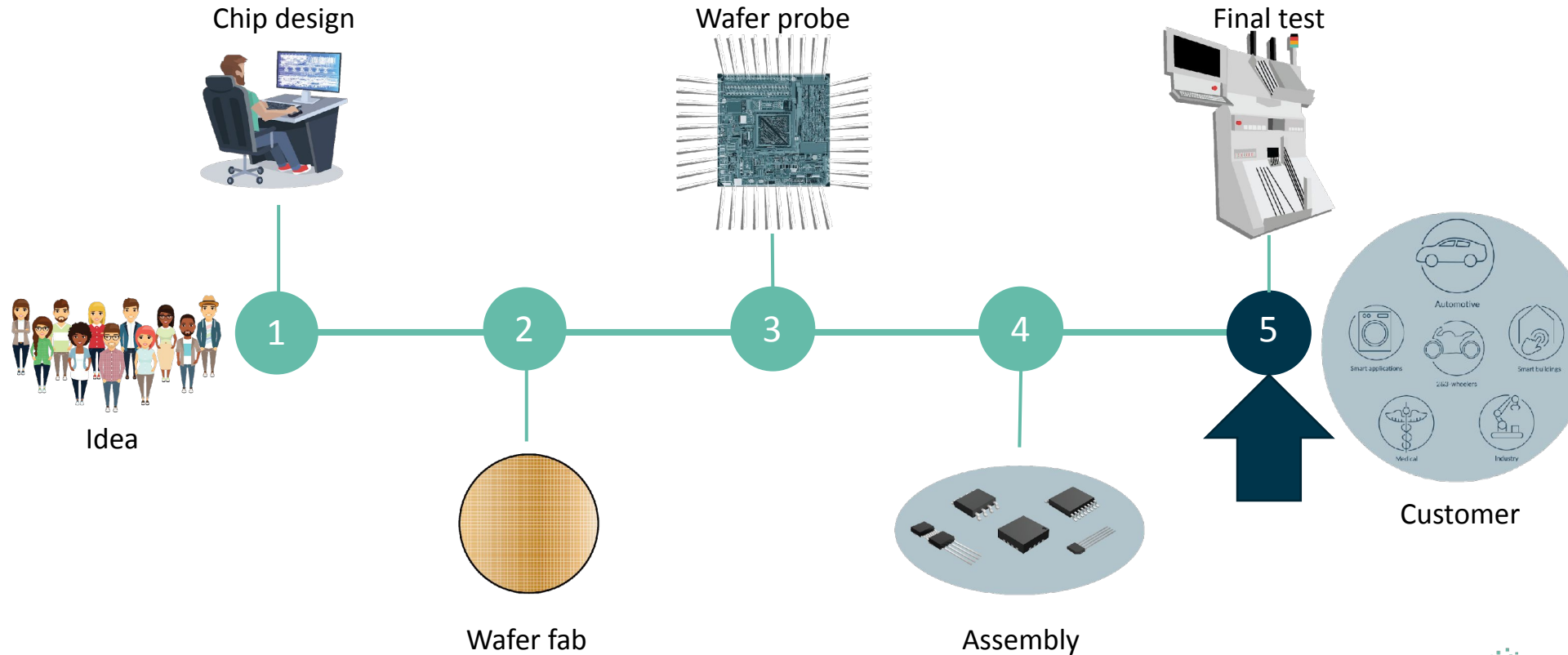
## Part 1: SITUATIONAL OVERVIEW

**Melexis**  
INSPIRED ENGINEERING

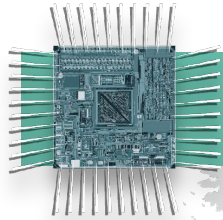
# Motivation

- As a responsible and future oriented player, Melexis is protecting it`s customers. This includes to secure the supply chain against environmental and/or material based events (contingency plan). The increase in business leads to demand beyond Melexis Erfurt capability.
- Test hardware at Melexis Sofia is identical to current used equipment.
- Test software is identical to the current software
- Logistic control will be done unchanged by Melexis
- Final tests flow on device level will remain unchanged
- Same test routing is used as the current released site. The routing is fixed by the Oracle system, no risk of escape.

# Typical Process flow



# Operations sites



Probing



Testing & Packing



Corbeil  
Kuching  
Erfurt  
Sofia  
Ieper



Erfurt  
Sofia  
Ieper



# Melexis Erfurt

- Located in Erfurt, Germany
- Headquarters in Ieper, Belgium
- Wafer and backend testing
- Total capacity of 8.5M devices/month
- Non stop working
- Total number of employees: 250
- Next to Xfab Erfurt
- Certified ISO9001, ISO14001

## Focus area


- Pressure sensor
- Optical sensor
- Wafer delivery



# Melexis Sofia

- Located in Sofia, Bulgaria
- Headquarters in Ieper, Belgium
- Wafer and backend testing
- Trim and form capability
- Total capacity of 80M devices/month
- Non stop working
- Total number of employees: 500+
- Certified IATF16949, ISO9001

## Focus area

- Latch & Switch 
- Speed Sensors 
- Motor drivers 
- Fan & pump drivers 
- Temperature sensors 
- Led drivers 





## Part 2: QUALIFICATION STRATEGY

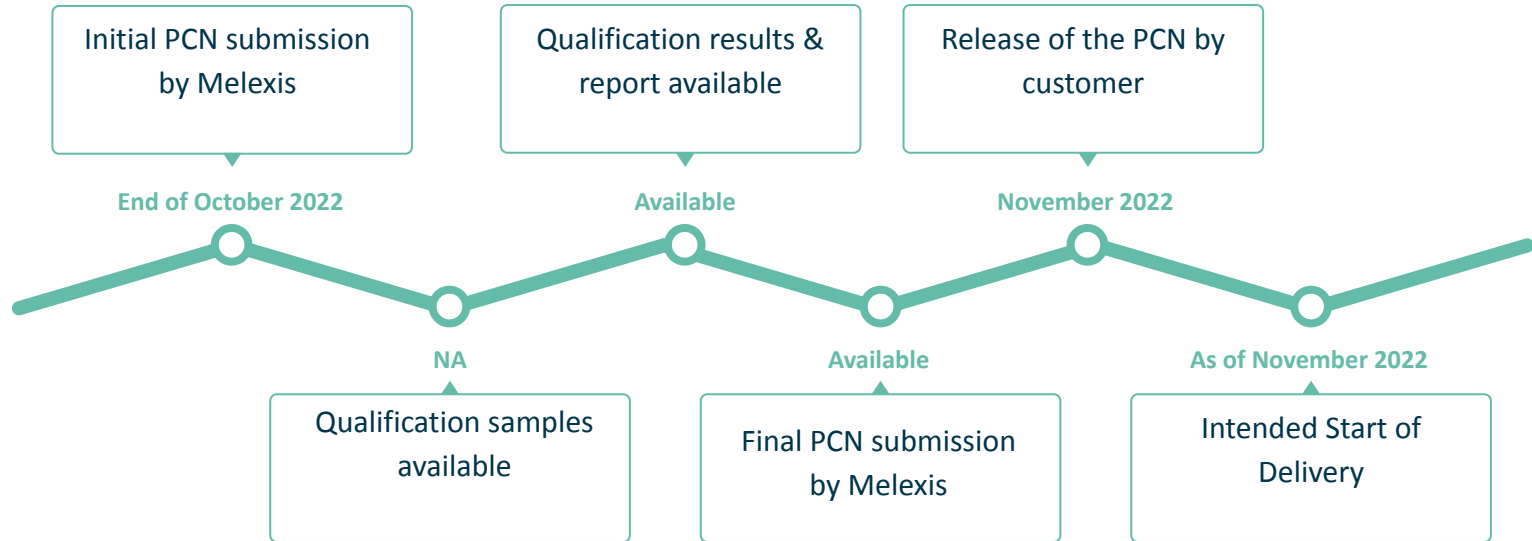
# Qualification Strategy - General

- Based on Risk Assessment including AEC-Q100 and ZVEI guidelines
- Use of package generic qualification data considering
  - Automotive Grades
  - Assembly Bill-of-Material & Bill-of-Process
  - Wafer Technology
- Whenever possible, re-use of Melexis qualified Bill-of-Material & Bill-of-Process will be applied



## Part 3: KEY MILESTONES

# Key Milestones





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