


Standardized Information for Process/Product Change Notification (PCN)

1. Product Change Notification [PCN] basic data					
Customer		Name Customer:			
		Contact Email address:			
1.1 Compa		Site submitting the change:		Melexis Ieper	
		Affected site(s):	Melexis Supplier		
1.2 PCN No.		MCM-12853			
1.3 Title of PCN		PCN: Alternative source IMC process for current sensors products [MLX91208CAL]			
1.4 Product Category		Active Components - Integrated Circuits			
1.5 Issue date		26-Oct-2021			
1.6 Note in case of Pre-Initial PCN (optional)					
1.7 PCN revision history (optional)		1.8 Issue date of previous revision (optional)		1.9 Delta to previous revision (optional)	

2. PCN Team	
2.1 Contact supplier	

<b>2.1.1 Name</b>	Lisa Vanheerswynghels	
<b>2.1.2 Phone</b>	+32 57 22 62 07	
<b>2.1.3 Email</b>	pcn_mlx@melexis.com	
<b>2.2 Team supplier (optional)</b>		
<b>2.2.1 Name (optional)</b>	<b>2.2.2 Phone (optional)</b>	<b>2.2.3 Email (optional)</b>

### 3. Changes

No.	3.0 Ident	3.1 Category	3.2 Type of change
#1	SEM-AN-01	ANY	Any change with impact on agreed upon technical contractual agreements
#2	SEM-DS-01	DATA SHEET	Change of datasheet parameters/electrical specification (min./max./typ. values) and/or AC/DC specification
#3	SEM-DS-02	DATA SHEET	Correction of data sheet or issue of errata
#4	SEM-PW-08	PROCESS - WAFER PRODUCTION	New / change of passivation or die coating (without bare die)
#5	SEM-PW-12	PROCESS - WAFER PRODUCTION	Change of specified wafer process sequence (deletion and/or additional process step)
#6	SEM-PW-13	PROCESS - WAFER PRODUCTION	Move all or parts of production to a different wafer fab site.
#7	SEM-PA-13	PROCESS - ASSEMBLY	Change of product marking
#8	SEM-EQ-01	EQUIPMENT	Production from a new equipment/tool which uses a different basic technology or which due to its unique form or function can be expected to influence the integrity of the final product

#9	SEM-QG-01	Q-GATE	Change of the test coverage/testing process flow used by the supplier to ensure data sheet compliance (e.g. elimination/addition of electrical measurement/test flow block; relaxation/enhancement of monitoring procedure or sampling)
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4. Description of change		
	Old	New
Description #1	IMC material: CoFe	IMC material: FeNi
Description #2	Hysteresis, Remanent Field (Bop): +/- 10uT	Hysteresis, Remanent Field (Bop): +/- 15uT
Description #3	Third row marking: YYWWHB	Third row marking: YYWWEH
Description #4	Interface / adhesion layer: Epoxy	Interface / adhesion layer: Polyimide
Description #5	Annealing: at raw material level	Annealing: after IMC electroplating
Description #6	IMC Supplier: Axetris (Switzerland)	IMC Supplier: XFAB-Itzehoe (Germany)
Description #7	Third row marking: YYWWHB	Third row marking: YYWWEH
Description #8	Glueing and etching of metal strips	Electroplating
Description #9	No Hysteresis process control at Melexis	Hysteresis Process control at Melexis: 100% hysteresis measurement at Final Test
4.6 Anticipated impact on form, fit, function, reliability or processability?	<ul style="list-style-type: none"> <li>- Based on Risk Assessment including AEC-Q100 and ZVEI guidelines</li> <li>- Wide variety of automotive products qualified. Generic data available, considering automotive grade</li> <li>- Whenever possible, re-use of Melexis qualified Bill-of-Material &amp; Bill-of-Process will be applied</li> </ul>	
4.7 Anticipated impact on order code	<p>No impact, current order codes remain valid</p> <p>The product ordering code will not change as the products will not co-exist, the Axetris process is no longer supported in the future outside of the inventory built up at Melexis</p>	

## 5. Reason / motivation for change

<b>5.1 Motivation</b>	Transfer from Axetris to XFAB-Itzehoe as part of the Melexis long term product strategy and driven by End-of-Life at Axetris.
<b>5.2 Additional explanation (optional)</b>	<p>Part of Melexis long term product strategy</p> <ul style="list-style-type: none"> <li>- Automotive qualified electroplating technology at XFAB-Itzehoe</li> <li>- Automotive qualified annealing process at Melexis</li> <li>- Increased automation, standardized and state-of-the-art IMC process at XFAB-Itzehoe ready for further volume growth</li> <li>- Integration of front-end and back-end wafer processes at XFAB-Itzehoe</li> <li>- +1 Billion devices based on XFAB-Itzehoe IMC technology (magnetic position sensors, current sensors) delivered to the field</li> </ul> <p>Timeline driven by End-of-Life Axetris</p> <ul style="list-style-type: none"> <li>- Axetris end-of-life announcement due to equipment lifetime.</li> <li>- Supply chain was secured during change with pre-built inventory based on customer forecast</li> </ul>

## 6. Marking of parts / traceability of change

<b>6.1 Description</b>	<p>The marking of the parts will be changed as described in detail in the attached presentation.</p> <p>Traceability is ensured by lot number and datecode through the Melexis ERP system.</p>
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## 7. Timing / schedule

<b>7.1 Date of qualification results</b>	February 2022	
<b>7.2 Last order date (optional)</b>		
<b>7.3 Last delivery date (optional)</b>		
<b>7.4 Intended start of delivery</b>	May 2022	Please contact your Customer Relations responsible for detailed information. Note that the start of delivery can shift depending on the moment Melexis receives the customer approval.

7.5 Qualification samples available?	Yes available	
	Samples can be requested through pcn_mlx@melexis.com	
7.6 Customer feedback required until	09-Nov-2021	Please provide your initial feedback through the 'Customer Feedback' sheet as acknowledgement

### 8. Qualification / validation

8.1 Description (e.g. qualification or validation plan)	<ul style="list-style-type: none"> <li>- Based on Risk Assessment including AEC-Q100 and ZVEI guidelines</li> <li>- Wide variety of automotive products qualified. Generic data available, considering automotive grade</li> <li>- Whenever possible, re-use of Melexis qualified Bill-of-Material &amp; Bill-of-Process will be applied</li> </ul>		
8.2 Qualification report and qualification results	Will be available at date:	issue date	March 2022 (expected)

### 9. Input to customer for risk assessment process

See attached presentation: BOM&BOP Risk assessment

### 10. Attachments (e.g. new datasheet, additional documentation, pictures, process flow, sample plan, ...)

MCM-12853 ZVEI delta qualification matrix.xlsm  
 BOM & BOP Risk Assessment\_Axetris transfer.xlsx  
 DIGI-KEY\_Alternative source IMC Process.pdf















