



PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN Number: **22039**
 Date Issued: **12/20/2022**
 Product(s) Affected:

PN	MMID
PEF31001VSV13	95X950
PEF32001VSV13	95X949
PEF31002VTV13	95X357
PEF32002VTV13	95X355

Manufacturing Location Affected: UMC / XFAB
 Date Effective (90 day window):
 Date Issued: **12/20/2022**
 Date Issued +90 days: **3/20/2023**

- Means of Distinguishing Changed Devices:
- Product Mark: (Assembly Site Code)
 - Back Mark
 - Date Code
 - Other

Contact: Your local MaxLinear Marketing Representative
 or contact our Customer Support team by creating a Support Ticket at
<http://www.maxlinear.com/support/createcase>
 Phone: 1-760-692-0711

Attachment: Yes No

Samples: Request from MaxLinear Marketing Representatives

Purpose of Change:

To increase capacity MaxLinear will introduce a 2nd Silicon Foundry source for its DuSLIC product Family. The additional silicon foundry will be XFAB, based in France. There is no change in form, fit or function. The first deliveries from XFAB are planned for Q4-2022/Q1-2023. The part numbers and ordering codes listed above are dedicated to the new production flow.

Description of Change:

BOM Material change: No change
Performance: No change
Software: No change
External Hardware: No change
Marking: No change
Reliability: No change
Documentation: No change, Datasheet and POD are the same

- Die Technology
- Wafer Fabrication
- Assembly Process
- Equipment
- Material
- Testing
- Product Desing
- Manufacturing Site
- Data Sheet
- Yield Enhancement
- Software
- Other:

Reliability/Qualification Summary: See below



Customer Acknowledgement of Receipt within 30 days of issue. Lack of acknowledgement within 30 days constitutes acceptance of change.

Please fax or email this form to the contact above after completing the following information:

Customer: _____

Name: _____

Title: _____

Date: _____

E-Mail: _____

Phone: _____

Fax: _____

Approval for shipments prior to effective date

Customer Comments (Optional):

XFAB Certifications

- ISO 9001 Quality Management System
- IATF16949 Automotive Quality Management System
- ISO 14001 Environmental Management System

Comparison of UMC - XFAB

	UMC		XFAB	
Location	Singapore		France	
Technology	C11N		C11N	
Substrate	p-bulk		p-bulk	
Wafer Diameter[mm]	300		200	
Minimum Structures[nm]	130		130	
Number of Metal Layers	5		5	
Material	Cu		Cu	
Bond Pad Composition	AlCu		AlCu	
Passivation Layers	SiO/SiN		SiO/SiN	
Ordering Codes and Part Numbers	PEF31001VSV12	950950	PEF31001VSV13	95X950
	PEF32001VSV12	950949	PEF32001VSV13	95X949
	PEF31002VTV12	951357	PEF31002VTV13	95X357
	PEF32002VTV12	951355	PEF32002VTV13	95X355
Marking	PEF31001VSV12	SLLU4	PEF31001VSV12	SLLX4
	PEF32001VSV12	SLLU3	PEF32001VSV12	SLLX3
	PEF31002VTV12	SLLV6	PEF31002VTV12	SLLX6
	PEF32002VTV12	SLLV5	PEF32002VTV12	SLLX5



Reliability Tests

Assembly Location	SPIL		JCET	
	PEF31001 – QFN44 PEF32001 – QFN44	PEF31002 – QFN68 PEF32002 – QFN68	PEF31001 – QFN44 PEF32001 – QFN44	PEF31002 – QFN68 PEF32002 – QFN68
HTOL Tj = 125°C, 1.6V, 3.6V, 15V JESD22-A108	Ref. to PEF32002	Lot#1 168h: 0/80 500h: 0/80 1000h: 0/80 Lot#2 168h: 0/80 500h: 0/80 1000h: 0/80 Lot#3 168h: 0/80 500h: 0/80 1000h: 0/80	Ref. to SPIL	Ref. to SPIL
ESD-HBM JS-001	1500V PASS	1500V PASS	Ref. to SPIL	Ref. to SPIL
ESD-CDM JS-002	500V PASS	1000V PASS	Ref. to SPIL	Ref. to SPIL
Latch-up 100mA, 85°C JESD78	0/6pcs	0/6pcs	Ref. to SPIL	Ref. to SPIL
uHAST 130°C/85% RH JESD22-A118	0/3x25pcs	0/3x25pcs	0/3x25pcs	0/3x25pcs
Temperature Cycling 700x, (-55 / +125°C) JESD22-A104	0/3x25pcs	0/3x25pcs	0/3x25pcs	0/3x25pcs
High Temperature Storage 150°C, 1000h JESD22-A103	Ref. to PEF32002	0/3x25pcs	Ref. to PEF32002	0/3x25pcs

Schedule

Samples available: Yes