



## Product Change Notification - JAON-24FRFP480

**Date:**

20 Jun 2016

**Product Category:**

Micrel; Analog (Thermal, Power Management & Safety); Supertex

**Notification subject:**

CCB 1737.01 Intermediate Notice: Qualification of Microchip 8 inch Fabrication site for Micrel products manufactured with the BCDSi Process Technology.

**Notification text:****PCN Status:**

Intermediate notification

**Microchip Parts Affected:**

Please open the attachments found in the attachments field below labeled as PCN\_#\_Affected\_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

**Description of Change:**

Qualification of Microchip 8 inch Fabrication site for Micrel products manufactured with the BCDSi Process Technology. This PCN is to inform you that qualification of the BCDSi process technology has completed and to provide the report for your review. Although we are providing you with the qualification data, products in this process technology will not ship from Microchip's Fab's until after the final PCN has been issued. Please review the FAQ linked [here](#) for additional information about this change.

**Pre Change:**

Fabricated at Micrel fabrication site (San Jose, CA, USA) using 6 inch wafers.

**Post Change:**

Fabricated at Microchip Fabrication site using 8 inch wafers.

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve productivity with the closure of the Micrel fab as part of the integration of Micrel and Microchip.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

Catalog part numbers fabricated in Microchip Fabs will not ship until the final PCN has been issued. Microchip will issue Final PCNs as catalog part numbers (CPN) are released to production.

NOTE: This FAB transition will vary by catalog part number (CPN) and may take several months/years to complete the transition.

**Summary Time Table of notable events to date:**

	September 2015					---	February 2016				March 2016				
	36	37	38	39	40		05	06	07	08	09	10	11	12	13
Initial PCN Issue	X														
Date															
Qual Report Available											X				

**Markings to Distinguish Revised from Unrevised Devices:**

Traceability code and MPC on shipping label.

**Revision History:**

**September 1, 2015:** Issued initial notification as PCN number [CYER-31JLEX869](#)

**March 3, 2016:** Issued intermediate notification with a different PCN number. Attached the Qualification Report. Revised the estimated first ship date (EFSD) to inform that the EFSD will be revealed in the final PCN.

**June 20, 2016:** Updated the Qualification Report to add the note on the ESD ratings. The change described in this PCN does not alter Micrel's or Microchip's current regulatory compliance regarding the material content of the applicable products.

**Attachment(s):**



[PCN\\_JAON-24FRFP480\\_Qual\\_Report.pdf](#)

[PCN\\_JAON-24FRFP480\\_Affected\\_CPN.pdf](#)

[PCN\\_JAON-24FRFP480\\_Affected\\_CPN.xls](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

**Terms and Conditions:**

If you wish to change your product/process change notification (PCN) profile please log on to our website at <http://www.microchip.com/PCN> sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

To opt out of future offer or information emails (other than product change notification emails), click here to go to [microchipDIRECT](#) and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

JAON-24FRFP480 - CCB 1737.01 Intermediate Notice: Qualification of Microchip 8 inch Fabrication site for Micrel products manufactured with the BCDSi Process Technology.

Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC1555YD5-TR
MIC1555YM5-TR
MIC1555YMU-T5
MIC1555YMU-TR
MIC1557YD5-TR
MIC1557YM5-TR
MIC2141YM5-TR
MIC2142YM5-TR
MIC2145YML
MIC2145YML-TR
MIC2145YMM
MIC2145YMM-TR
MIC2177-3.3YWM
MIC2177-3.3YWM-TR
MIC2177-5.0YWM
MIC2177-5.0YWM-TR
MIC2177YWM
MIC2177YWM-TR
MIC2178-3.3YWM
MIC2178-3.3YWM-TR
MIC2178-5.0YWM
MIC2178-5.0YWM-TR
MIC2178YWM
MIC2178YWM-TR
MIC2179-3.3YSM
MIC2179-3.3YSM-TR
MIC2179-5.0YSM
MIC2179-5.0YSM-TR
MIC2179YSM
MIC2179YSM-TR
MIC2182-3.3YM
MIC2182-3.3YM-TR
MIC2182-3.3YSM
MIC2182-3.3YSM-TR
MIC2182-5.0YM
MIC2182-5.0YM-TR
MIC2182-5.0YSM
MIC2182-5.0YSM-TR
MIC2182YM
MIC2182YM-TR
MIC2182YSM
MIC2182YSM-TR
MIC2183YM

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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC2183YM-TR
MIC2183YQS
MIC2183YQS-TR
MIC2184YM
MIC2184YM-TR
MIC2184YQS
MIC2184YQS-TR
MIC2185YM
MIC2185YM-TR
MIC2185YQS
MIC2185YQS-TR
MIC2186YM
MIC2186YM-TR
MIC2186YQS
MIC2186YQS-TR
MIC2193YM
MIC2193YM-TR
MIC2194YM
MIC2194YM-TR
MIC2196YM
MIC2196YM-TR
MIC2198YML
MIC2198YML-TR
MIC2199YML
MIC2199YML-TR
MIC2505-1YM
MIC2505-1YM-TR
MIC2505-2YM
MIC2505-2YM-TR
MIC2505YM
MIC2505YM-TR
MIC2506YM
MIC2506YM-TR
MIC2514YM5-TR
MIC2560-0YWM
MIC2560-0YWM-TR
MIC2560-1YWM
MIC2560-1YWM-TR
MIC2561-0YM
MIC2561-0YM-TR
MIC2561-1YM
MIC2561-1YM-TR
MIC2562A-0YM

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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC2562A-0YM-TR
MIC2562A-1YM
MIC2562A-1YM-TR
MIC2562A-1YTS
MIC2562A-1YTS-TR
MIC2563A-0YSM
MIC2563A-0YSM-TR
MIC2563A-1YSM
MIC2563A-1YSM-TR
MIC4120YME
MIC4120YME-TR
MIC4120YML-TR
MIC4123YME
MIC4123YME-TR
MIC4123YML-TR
MIC4124YME
MIC4124YME-TR
MIC4124YML-TR
MIC4125YME
MIC4125YME-TR
MIC4125YML-TR
MIC4126YME
MIC4126YME-TR
MIC4126YML-TR
MIC4126YMME
MIC4126YMME-TR
MIC4127YME
MIC4127YME-TR
MIC4127YML-TR
MIC4127YMME
MIC4127YMME-TR
MIC4128YME
MIC4128YME-TR
MIC4128YML-TR
MIC4128YMME
MIC4128YMME-TR
MIC4129YME
MIC4129YME-TR
MIC4129YML-TR
MIC4414YFT-T5
MIC4414YFT-TR
MIC4415YFT-T5
MIC4415YFT-TR

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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC4416YM4-TR
MIC4417YM4-TR
MIC4420CYP
MIC4420YM
MIC4420YMM
MIC4420YMM-TR
MIC4420YM-TR
MIC4420YN
MIC4420ZM
MIC4420ZM-TR
MIC4420ZN
MIC4420ZT
MIC4421AXM-TR
MIC4421AYM
MIC4421AYM-TR
MIC4421AYN
MIC4421AZM
MIC4421AZM-TR
MIC4421AZN
MIC4421AZT
MIC4421CYP
MIC4421YM
MIC4421YM-TR
MIC4421YN
MIC4421ZM
MIC4421ZM-TR
MIC4421ZN
MIC4421ZT
MIC4422AYM
MIC4422AYM-TR
MIC4422AYN
MIC4422AZM
MIC4422AZM-TR
MIC4422AZN
MIC4422AZT
MIC4422CYP
MIC4422YM
MIC4422YM-TR
MIC4422YN
MIC4422ZM
MIC4422ZM-TR
MIC4422ZN
MIC4422ZT

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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC4423CYP
MIC4423YM
MIC4423YM-TR
MIC4423YN
MIC4423YWM
MIC4423YWM-TR
MIC4423ZN
MIC4423ZWM
MIC4423ZWM-TR
MIC4424CYP
MIC4424YM
MIC4424YM-TR
MIC4424YN
MIC4424YWM
MIC4424YWM-TR
MIC4424ZN
MIC4424ZWM
MIC4424ZWM-TR
MIC4425CYP
MIC4425YM
MIC4425YM-TR
MIC4425YN
MIC4425YWM
MIC4425YWM-TR
MIC4425ZWM
MIC4425ZWM-TR
MIC4426CYP
MIC4426YM
MIC4426YMM
MIC4426YMM-TR
MIC4426YM-TR
MIC4426YN
MIC4426ZM
MIC4426ZM-TR
MIC4426ZN
MIC4427CYP
MIC4427YM
MIC4427YMM
MIC4427YMM-TR
MIC4427YM-TR
MIC4427YN
MIC4427ZM
MIC4427ZM-TR

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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC4427ZN
MIC4428CYP
MIC4428YM
MIC4428YMM
MIC4428YMM-TR
MIC4428YM-TR
MIC4428YN
MIC4428ZM
MIC4428ZM-TR
MIC4428ZN
MIC4429CYP
MIC4429YM
MIC4429YMM
MIC4429YMM-TR
MIC4429YM-TR
MIC4429YN
MIC4429ZM
MIC4429ZM-TR
MIC4429ZN
MIC4429ZT
MIC4451CYP
MIC4451YM
MIC4451YM-TR
MIC4451YN
MIC4451ZT
MIC4451ZT-L2
MIC4451ZT-L3
MIC4452CYP
MIC4452VM
MIC4452VM-TR
MIC4452YM
MIC4452YM-TR
MIC4452YN
MIC4452ZT
MIC4467CYP
MIC4467YWM
MIC4467YWM-TR
MIC4467ZN
MIC4467ZWM
MIC4467ZWM-TR
MIC4468CYP
MIC4468YN
MIC4468YWM



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Affected Catalog Part Numbers (CPN)

PCN_JAON-24FRFP480
CATALOG_PART_NBR
MIC4468YWM-TR
MIC4468ZN
MIC4468ZWM
MIC4468ZWM-TR
MIC4469CYP
MIC4469YN
MIC4469YWM
MIC4469YWM-TR
MIC4469ZN
MIC4469ZWM
MIC4469ZWM-TR
MIC5018YM4-TR
MIC5019YFT-T5
MIC5019YFT-TR
MIC5231-2.75YM5-TR
MIC5231-3.0YM5-TR
MIC5231-3.3YM5-TR
MIC5231-5.0YM5-TR
MIC5891YN
MIC5891YWM
MIC5891YWM-TR
SPN030022Y-TR
SPN040028G
Y30442D



**MICROCHIP**

**QUALIFICATION REPORT**  
RELIABILITY LABORATORY

**PCN #: JAON-24FRFP480**

**Date**  
**January 22, 2016**

**Qualification of Microchip 8 inch Fabrication site for Micrel products  
manufactured with the BCDSi Process Technology.**

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	Wafer Size	PROCESS NAME
MIC2199YML	DFN44-12L	UNISEM IPOH MALAYSIA	8"	BCDSI

## DIE QUALIFICATION RESULTS

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	1000 HR Rej/ss	COMMENTS
<b>HTOL</b> High Temperature Operating Life Test	JESD22, Method 108	1540	V416.201815.210MQA	0/77	0/77	
	TA= + 125°C	1541	V416.201815.200MQA	0/77	0/77	
	VCC = +16V	1542	V416.201815.3000MQA	0/77	0/77	

### ELECTROSTATIC DISCHARGE

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
<b>ESD-HBM</b> Human Body Model ATE Test @ Room +25C	R= 1500 Ohms C= 100 pF 1X +/- Voltage	1540	V416.201815.210MQA	+/-2000V	0/3	Note: ESD ratings are device specific. All Products qualified on the 8" Micrel process technologies will have the same or better ESD and Latch-up performance as the 6" San Jose Products.
<b>ESD-CDM</b> Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1540	V416.201815.210MQA	+/-1500V	0/3	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
<b>LATCH-UP</b>	JESD-78 TA = +25°C	1540	V416.201815.210MQA	I/O LU O/V LU	0/6 0/6	

PACKAGE QUALIFICATION RESULTS					
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	Rej/ss	COMMENTS
Level 1 Pre-conditioning Flow	JESD22-A113	1540	V416.201815.210MQA	0/323	
		1541	V416.201815.200MQA	0/143	
		1542	V416.201815.3000MQA	0/145	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
PRESSURE POT With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A102  Ta = +121°C/100%RH  15 PSIG	1540	V416.201815.210MQA	0/45	
		1541	V416.201815.200MQA	0/45	
		1542	V416.201815.3000MQA	0/45	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
HAST With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED)  Ta= +130°C/85%RH	1540	V416.201815.210MQA	0/45	
		1541	V416.201815.200MQA	0/45	
		1542	V416.201815.3000MQA	0/45	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 CY Rej/ss	COMMENTS
TEMP CYCLE With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A104  Ta = -65°C / +150°C	1540	V416.201815.210MQA	0/45	
		1541	V416.201815.200MQA	0/45	
		1542	V416.201815.3000MQA	0/45	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A103  Ta = +150°C	1540	V416.201815.210MQA	0/76	
FLAMMABILITY	UL-94V-0  Certified	All mold compounds used by Micrel meet this standard. See the UL website on-line list of material flammability certifications. Micrel requires a Certificate of Compliance from the assembly house and we verify the certifications on the web.			