



Product Change Notification / LIAL-09UEWG307

Date:

21-Dec-2020

Product Category:

Clock and Timing - Clock and Data Distribution, Clock and Timing - High Speed Communication

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4395 Initial Notice: Qualification of MMT as an additional assembly site for selected Micrel products available in 16L VQFN (3x3x1.00mm) package.

Affected CPNs:

[LIAL-09UEWG307_Affected_CPN_12212020.pdf](#)
[LIAL-09UEWG307_Affected_CPN_12212020.csv](#)

Notification Text:

PCN Status:Initial notification.

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section

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

Description of Change:

Qualification of MMT as an additional assembly site for selected Micrel products available in 16L VQFN (3x3x1.00mm) package.

Pre Change: Assembled at UNIS assembly site using 8290 die attach, G770HCD molding compound material and without lead-lock lead frame

Post Change:Assembled at UNIS assembly site using 8290 die attach, G770HCD molding compound material and without lead-lock lead frame or assembled at MMT assembly site using 8600 die attach, G700LTD molding compound material and and with lead-lock lead frame.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Unisem (M) Berhad Perak, Malaysia (UNIS)	Unisem (M) Berhad Perak, Malaysia (UNIS)	Microchip Technology Thailand (MMT)
Wire material	Au	Au	Au
Die attach material	8290	8290	8600
Molding compound material	G770HCD	G770HCD	G700LTD
Lead frame material	C194	C194	C194
Lead Frame Lead Lock	No	No	Yes
Moisture Sensitivity Level	MSL-2	MSL-2	MSL-1

Impacts to Data Sheet:None.

Change Impact:

None

Reason for Change:

To improve on-time delivery performance by qualifying MMT as an additional assembly site.

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

February 2021

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

Workweek	December 2020					-	February 2021				
	49	50	51	52	53		05	06	07	08	09
Initial PCN Issue Date				X							
Qual Report Availability								X			
Final PCN Issue Date								X			

Method to Identify Change:

Traceability code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:

December 21, 2020: Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

[PCN_LIAL-09UEWG307_QUAL_PLAN.pdf](#)

[PCN_LIAL-09UEWG307_Pre and Post Change Summary.pdf](#)

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

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CCB 4395
Pre and Post Change Summary
PCN # LIAL-09UEWG307

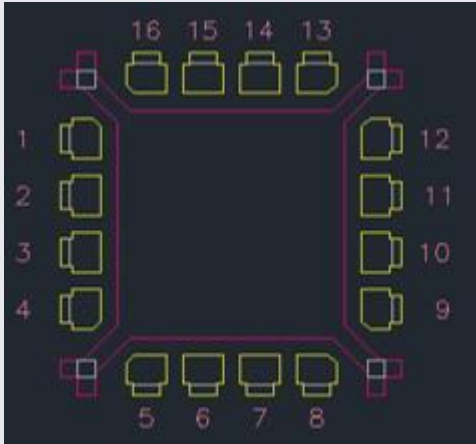
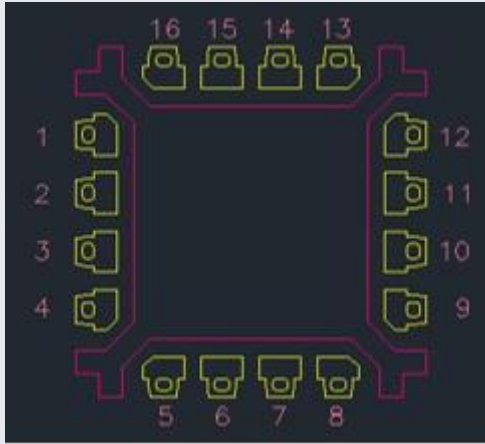


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Lead frame comparison

Pre change	Post Change
UNIS	MMT
 <p>The UNIS lead frame diagram shows a square package with 16 leads. The top edge has leads 13, 14, 15, and 16. The right edge has leads 12, 11, 10, and 9. The bottom edge has leads 8, 7, 6, and 5. The left edge has leads 1, 2, 3, and 4. The leads are arranged in a standard square configuration.</p>	 <p>The MMT lead frame diagram shows a square package with 16 leads. The top edge has leads 13, 14, 15, and 16. The right edge has leads 12, 11, 10, and 9. The bottom edge has leads 8, 7, 6, and 5. The left edge has leads 1, 2, 3, and 4. The leads are arranged in a standard square configuration, similar to UNIS, but with a different internal lead layout.</p>



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QUALIFICATION PLAN SUMMARY

PCN# LIAL-09UEWG307

Date

October 1, 2020

**Qualification of MMT as an additional assembly site for
selected Micrel products available in 16L VQFN (3x3x1.00mm)
package.**

Purpose: Qualification of MMT as an additional assembly site for selected Micrel products available in 16L VQFN (3x3x1.00mm) package.

Assembly site	MMT
BD Number	BDM-002729/A
CCB	4395
MP Code (MPC)	2D8017NCAA76
Part Number (CPN)	SY88349NDLMG
MSL information	MSL1
Assembly Shipping Media (T/R, Tube/Tray)	Tube
Base Quantity Multiple (BQM)	100
Reliability Site	MTAI
Paddle size	75x75
Material	C194
DAP Surface Prep	NiPdAu
Treatment	Roughening
Process	Etched
Lead-lock	Yes
Part Number	10101615
Lead Plating	NiPdAu
Strip Size	70x250mm
Strip Density	1170
Material	Au
Part Number	8600
Conductive	Yes
Part Number	G700LTD
PKG Type	VQFN
Pin/Ball Count	16
PKG width/size	3x3mm

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	MTAI	30 bonds from a min. 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25C MSL1/260	231	15	3	738	0	15	MTAI	Spares should be properly identified.
HAST	+130°C/85% RH for 96 hours . Electrical test pre and post stress at +25°C	77	5	3	246	0	10	MTAI	Spares should be properly identified.
UHAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at 25°C	77	5	3	246	0	10	MTAI	Spares should be properly identified. .
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at room temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	Spares should be properly identified. 1.

Affected Catalog Part Numbers (CPN)

SY75572LMG
SY75572LMG-TR
SY88149HALMG
SY89228UMG
SY89230UMG
SY89231UMG
SY88349NDLMG
SY84782UMG
SY89831UMG
SY89832UMG
SY89833LMG
SY89833ALMG
SY89834UMG
SY89840UMG
SY89841UMG
SY89842UMG
SY89871UMG
SY89872UMG
SY89873LMG
SY89874UMG
SY89874AUMG
SY89875UMG
SY89876LMG
SY88932LMG
SY88982LMG
SY88992LMG
SY88149NDLMG
SY88149HALMG-TR
SY89228UMG-TR
SY89230UMG-TR
SY89231UMG-TR
SY88349NDLMG-TR
SY84782UMG-TR
SY89831UMG-TR
SY89832UMG-TR
SY89833LMG-TR
SY89833ALMG-TR
SY89834UMG-TR
SY89840UMG-TR
SY89841UMG-TR
SY89842UMG-TR
SY89871UMG-TR
SY89872UMG-TR
SY89873LMG-TR
SY89874UMG-TR
SY89874AUMG-TR

SY89875UMG-TR
SY89876LMG-TR
SY88932LMG-TR
SY88982LMG-TR
SY88992LMG-TR
SY88149NDLMG-TR
SYCUSTDIP1-TR
SYCUSTDIP2-TR
SY89833LMG-TX
SY56011RMG
SY54017RMG
SY54017ARMG
SY56017RMG
SY54020RMG
SY54020ARMG
SY56020RMG
SY56020XRMG
SY58020UMG
SY58021UMG
SY58022UMG
SY54023RMG
SY54023ARMG
SY56023RMG
SY58023UMG
SY56216RMG
SY88422LMG
SY58609UMG
SY58610UMG
SY58611UMG
SY56011RMG-TR
SY54017RMG-TR
SY54017ARMG-TR
SY56017RMG-TR
SY54020RMG-TR
SY54020ARMG-TR
SY56020RMG-TR
SY58020UMG-TR
SY58021UMG-TR
SY58022UMG-TR
SY54023ARMG-TR
SY58023UMG-TR
SY56216RMG-TR
SY88422LMG-TR
SY58609UMG-TR
SY58610UMG-TR
SY58611UMG-TR
SY54023RMG-TR
SY56020XRMG-TR
SY56023RMG-TR

SY54011RMG
SY58011UMG
SY58012UMG
SY58013UMG
SY58017UMG
SY58018UMG
SY58019UMG
SY58016LMG
SY58606UMG
SY58607UMG
SY58608UMG
SY54011RMG-TR
SY58011UMG-TR
SY58012UMG-TR
SY58013UMG-TR
SY58017UMG-TR
SY58018UMG-TR
SY58019UMG-TR
SY58606UMG-TR
SY58607UMG-TR
SY58608UMG-TR
SY89854UMG
SY89854UMG-TR
SY89851UMG
SY89852UMG
SY89851UMG-TR
SY89852UMG-TR
SY84113BUMG
SY88303BLMG
SY88343BLMG
SY88353BLMG
SY88403BLMG
SY88773VMG
SY84113BUMG-TR
SY88303BLMG-TR
SY88353BLMG-TR
SY88403BLMG-TR
SY88773VMG-TR