Product Change Notification / ASER-27LSSS520

Date:

12-Feb-2021

Product Category:

Access Networks, Broadband Gateway

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4514 Initial Notice: Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

Affected CPNs:

ASER-27LSSS520_Affected_CPN_02122021.pdf
ASER-27LSSS520_Affected_CPN_02122021.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 to the right.

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

Description of Change: Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

Pre Change:
Assembled at ASEM assembly site without lead-lock, using PdCu bond wire, CRM1076DS die attach and CEL-9240HF10AK-G1 mold compound.

OR

Assembled at UNIC assembly site without lead-lock, using CuPdAu bond wire, 8290 die attach and G770HP mold compound.

OR

Assembled at MMT assembly site with lead-lock, using CuPdAu bond wire, 3280 die attach and G700LTD mold compound.

Post Change:
Assembled at ASEM assembly site without lead-lock, using PdCu bond wire, CRM1076DS die attach and CEL-9240HF10AK-G1 mold compound.

OR

Assembled at UNIC assembly site without lead-lock, using CuPdAu bond wire, 8290 die attach and G770HP mold compound.

OR

Assembled at MMT assembly site with lead-lock, using CuPdAu bond wire, 3280 die attach and G700LTD mold compound.
OR
Assembled at MTAI assembly site with lead-lock, using CuPdAu bond wire, 3280 die attach and G700LTD mold compound.

Pre and Post Change Summary:

	Pre Change			**Post Change**			
Assembly Site	ASE Group -Malaysia (ASEM)	Unisem Chengdu Co.,Ltd. (UNIC)	Microchip Technology Thailand (MMT)	ASE Group -Malaysia (ASEM)	Unisem Chengdu Co.,Ltd. (UNIC)	Microchip Technology Thailand (MMT)	Microchip Technology Thailand (MTAI)
Wire Material	PdCu	CuPdAu	CuPdAu	PdCu	CuPdAu	CuPdAu	CuPdAu
Die Attach Material	CRM1076DS	8290	3280	CRM1076DS	8290	3280	3280
Mold Compound Material	CEL-9240HF10AK-G1	G770HP	G700LTD	CEL-9240HF10AK-G1	G770HP	G700LTD	G700LTD
Lead Frame Material	170048372135XL	412513	10104808	170048372135XL	412513	10104808	10104808

Impacts to Data Sheet: None

Change Impact:
None

Reason for Change:
To improve manufacturability by qualifying MTAI as an additional assembly site.

Change Implementation Status:
In Progress or complete

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:

	February 2021			
Workweek	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: **February 12, 2021:** 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_ASER-27LSSS520_Pre and Post Change Summary.pdf
PCN_ASER-27LSSS520_Qual Plan.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our PCN home page select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the PCN FAQ section.

If you wish to change your PCN profile, including opt out, please go to the PCN home page select login

and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

QUALIFICATION PLAN SUMMARY

PCN#: ASER-27LSSS520

Date:
Dec 23, 2020

Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

Purpose: Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

CCB No.: 4514

Misc.	Assembly site	MTAI
	BD Number	BDM-002786/A
	MP Code (MPC)	3411HTM9CA02
	Part Number (CPN)	ZL88107LDF1
	MSL information	MSL-3/260
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTAI
Lead-Frame	Paddle size	232x232 mils
	Material	A194
	DAP Surface Prep	Ag selective Plated
	Treatment	BOT
	Process	Etched
	Lead-lock	Yes
	Part Number	10104808
	Lead Plating	Matte Tin
	Strip Size	70x250mm
	Strip Density	240 units//strip
Bond Wire	Material	CuPdAu
Die Attach	Part Number	3280
	Conductive	Yes
MC	Part Number	G700LTD
PKG	PKG Type	48
	Pin/Ball Count	7x7x1.0mm
	PKG width/size	11 mils
Die	Die Thickness	48

Reliability Test plan: STD Package Reliability Test plan on each package.

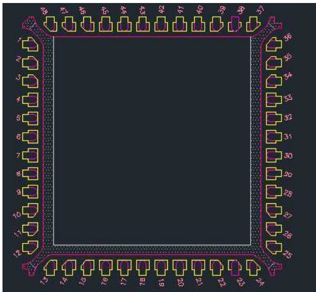
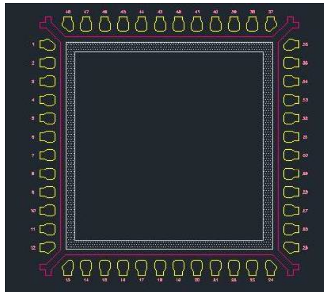
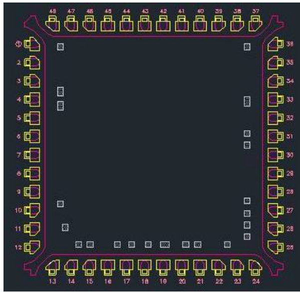
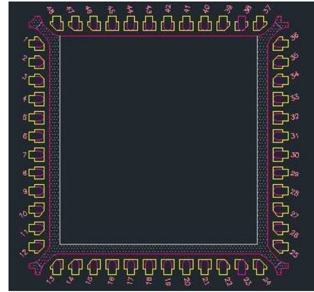
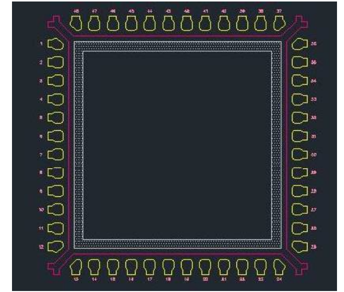
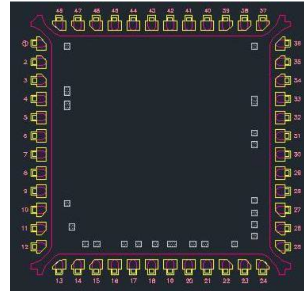
Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	MTAI	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Backward Solderability	J-STD-002 ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0	5	MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15	0	5	MTAI	30 bonds from a minimum of 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp.	45	5	1	50	0	25	MTAI	Must be in progress at time of package release to production, but completion is not required for release to production. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable)
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 +25°C. Perform SAM analysis using 45 samples per lot. MSL3 @ 260°C	231	15	3	738	0	15	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C. Extend to 192 hrs, post test at 25C	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. Extend to 1000 cycles, post test at 25C	77	5	3	246	0	15	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable).

CCB 4514
Pre and Post Change Summary
PCN #: ASER-27LSSS520

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

Lead frame Comparison

Pre Change	Post Change
ASEM  UNIC  MMT 	ASEM  UNIC  MMT/MTAI 

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ASER-27LSSS520 - CCB 4514 Initial Notice: Qualification of MTAI as an additional assembly site for selected MSC(

Affected Catalog Part Numbers(CPN)

LE9641PQC
LE9651PQC
LE9641PQCT
LE9651PQCT
LE89156PQC
LE89156PQCT
LE9642PQC
LE9642PQCT
LE9652PQC
ZL88107LDG1
LE9652MPQC
LE9652PQCT
ZL88107LDF1
LE9652MPQCT
LE79272PQC
LE79272PQCT
LE9530CPQC
LE9530DPQC
LE9530CPQCT
LE9530DPQCT