Product Change Notification / ASER-27LSSS520

Date:

05-Apr-2021

Product Category:

Access Networks, Broadband Gateway

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4514 Final 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_04052021.pdf
ASER-27LSSS520_Affected_CPN_04052021.csv

Notification Text:

PCN Status: Final notification.

PCN Type: Manufacturing Change

Microchip Parts Affected: Please open one of the attachments 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 MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

Pre and Post Change Summary:

	Pre Change			Post Change			
Assembly Site	ASE Group -Malaysia (ASEM)	Unisem Chengdu Co.,Ltd.	Microchip Technology Thailand	ASE Group -Malaysia (ASEM)	Unisem Chengdu Co.,Ltd.	Microchip Technology Thailand	Microchip Technology Thailand

		(UNIC)	(MMT)		(UNIC)	(MMT)	(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	A194	A194	A194	A194	A194	A194	A194
Lead Frame Lead-lock	No	No	Yes	No	No	Yes	Yes
	See Pre and Post Change Summary for comparison.						

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

Estimated First Ship Date:
March 30, 2021 (date code: 2114)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	February 2021				**March 2021**					**April 2021**			
Workweek	06	07	08	09	10	11	12	13	14	15	16	17	18
Initial PCN Issue Date		X											
Qual Report Availability											X		
Final PCN Issue Date											X		
Estimated Implementation Date									X				

Method to Identify Change: Traceability code

Qualification Report:
Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History:February 12, 2021: Issued initial notification.**April 5, 2021:** Issued final notification. Attached the Qualification Report. Removed Pre and Post Change fields. Provided estimated first ship date to be on March 30, 2021.

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 Report.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.

ASER-27LSSS520 - CCB 4514 Final Notice: Qualification of MTAI as an additional assembly site for selected MSCC products available in 48L VQFN (7x7x1mm) package.

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

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

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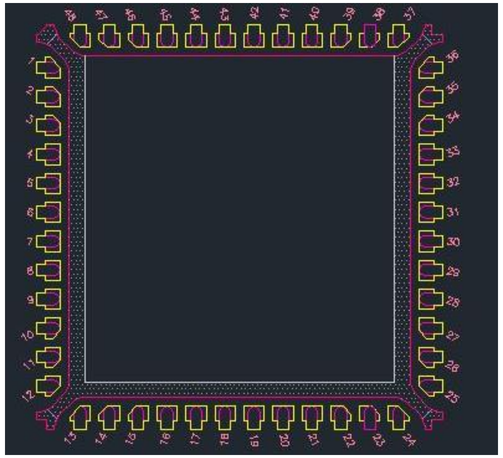
SMART | CONNECTED | SECURE

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

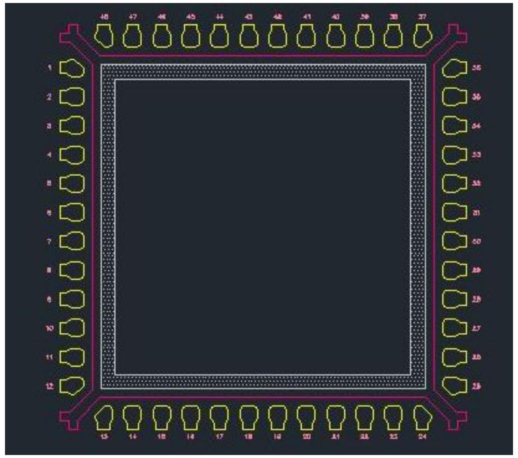
Lead frame Comparison

Pre Change

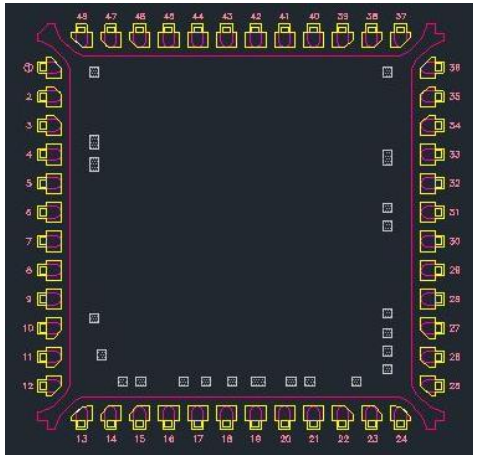
ASEM



UNIC

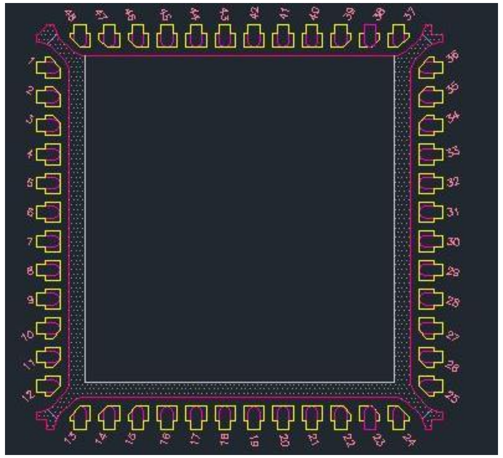


MMT



Post Change

ASEM



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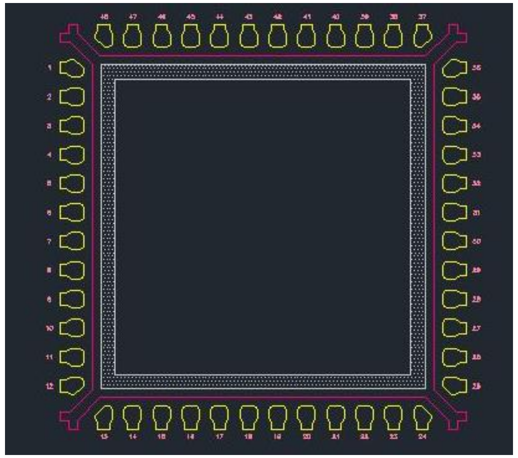
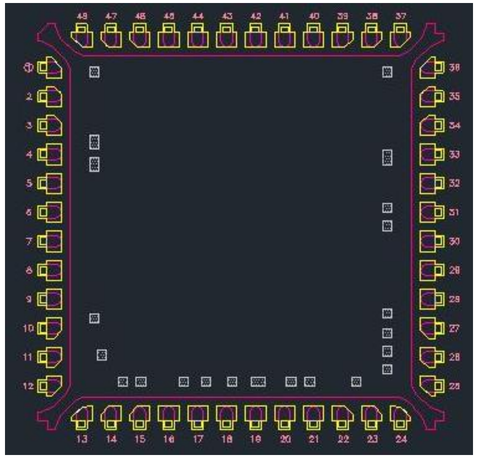


MMT/MTAI



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: ASER-27LSSS520

Date:
April 2, 2021

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
CN	ES351324
QUAL ID	R2100011 Rev. C
MP CODE	3411H7M9CA01
Part No.	LE9652PQC
Bonding No.	BDM-002786 Rev. A

Package

Type	48L VQFN
Package size	7x7x1.0 mm

Lead Frame

Paddle size	232 x 232 mils
Material	A194
Surface	Ag selective Plated
Process	Etched
Lead Lock	Yes
Part Number	10104808

Material

Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI213802513.000	GF07921225657.200	2051C75
MTAI213802989.000	GF07921225657.200	2051DQ0
MTAI213802998.000	GF07921225657.200	2051DW3

Result ☒ Pass ☐ Fail ☐ ___________________

48L VQFN (7x7x1.0 mm) assembled by MTAI pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test:** +25°C System: CHROMA3650	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C System: CHROMA3650			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: CHROMA3650		231(0)	0/231	Pass	77 units / lot
	Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H			231		
	Electrical Test: +25°C System: CHROMA3650		231(0)	0/231	Pass	
	Bond Strength:					
	Wire Pull (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (>15.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: CHROMA3650		231(0)	0/231	Pass	77 units / lot
	Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X			231		
	Electrical Test: +25°C System: CHROMA3650		231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: +25°C System: CHROMA3650		45(0)	0/45	Pass	
Solderability **Temp 215°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Solderability **Temp 245°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Bond Strength **Data Assembly**	Wire Pull (> 2.5 grams)	Mil.Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	