Product Change Notification / ASER-26UKDT173

Date:

12-Apr-2021

Product Category:

Broadband Gateway

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4514.001 Final Notice: Qualification of MTAI as an additional assembly site for selected MSCC LE96xxx device family available in 36L VQFN (4x6x1mm) package.

Affected CPNs:

ASER-26UKDT173_Affected_CPN_04122021.pdf
ASER-26UKDT173_Affected_CPN_04122021.csv

Notification Text:

PCN Status: Final notification.

PCN Type: Manufacturing Change
Microchip Parts Affected: Please open one of the files found in the Affected CPNs section.

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

Description of Change: Qualification of MTAI as an additional assembly site for selected MSCC LE96xxx device family available in 36L VQFN (4x6x1mm) package.

Pre and Post Change Summary:

	Pre Change			**Post Change**			
Assembly Site	ASE Group -Malaysia (ASEM)	ASE Group Chung-Li (ASCL)	Microchip Technology Thailand (MMT)	ASE Group -Malaysia (ASEM)	ASE Group Chung-Li (ASCL)	Microchip Technology Thailand (MMT)	Microchip Technology Thailand (MTAI)
Wire material	CuPdAu	PdCu	CuPdAu	CuPdAu	PdCu	CuPdAu	CuPdAu

Die attach material	CRM1076DS	EN4900	3280	CRM1076DS	EN4900	3280	3280
Molding compound material	CEL-9240HF10AK-G1	G631H-Y	G700LTD	CEL-9240HF10AK-G1	G631H-Y	G700LTD	G700LTD
Lead frame material	A194	A194	A194	A194	A194	A194	A194
DAP Surface Prep	Ag Ring Plated	Ag Ring Plated	Ag selective Plated	Ag Ring Plated	Ag Ring Plated	Ag selective Plated	Ag selective Plated
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 1, 2021 (date code: 2110)

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

Time Table Summary:

	March 2021				
Workweek	10	11	12	13	14
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:
March 4, 2021: Issued final notification.
April 12, 2021: Issued final notification. Attached the Qualification Report.

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-26UKDT173_Qual_Report.pdf
PCN_ASER-26UKDT173_Pre and Post Change Summary.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.

CCB 4514.001
Pre and Post Change Summary
Lead Frame Comparison
PCN#: ASER-26UKDT173

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

Lead Frame Comparison

Pre change			Post Change		
ASCL LF	ASEM LF	MMT LF	ASCL LF	ASEM LF	MMT/MTAI LF

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: ASER-26UKDT173

Date
April 2, 2021

Qualification of MTAI as an additional assembly site for selected MSCC LE96xxx device family available in 36L VQFN (4x6x1mm) package.

PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of MTAI as an additional assembly site for selected MSCC LE96xxx device family available in 36L VQFN (4x6x1mm) package.**
CCB No.	4514 and 4514.001
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
Mold Compound	G700LTD
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

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 [X] 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) Bond Shear (>15.00 grams)		15 (0) 15 (0)	0/15 0/15	Pass 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 **Electrical Test:** +25°C System: CHROMA3650	JESD22-A103	45(0)	45 0/45	Pass	45 units
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	

ASER-26UKDT173 - CCB 4514.001 Final Notice: Qualification of MTAI as an additional assembly site for select

Affected Catalog Part Numbers(CPN)

LE9653AQC
LE9653AQCT
LE9621AQC
LE9643AQC
LE9621AQCT
LE9643AQCT