

Product Change Notification - GBNG-10TTAV974

Date:

24 Aug 2019

Product Category:

Others; Ethernet PHYs

Affected CPNs:

Notification subject:

CCB 3782 Final Notice: Qualification of MTAI as an additional assembly site for selected Micrel products of the 0.18 um wafer technology at DBHU available in 48L TQFP (7x7x1.0mm) package.

Notification text:
PCN Status:

Final notification

PCN Type:

Manufacturing Change

Microchip Parts Affected:

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

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 Micrel products of the 0.18 um wafer technology at DBHU available in 48L TQFP (7x7x1.0mm) package.

Pre Change:

Assembled at ASE using CRM-1076WA die attach and G631H molding compound material.

Post Change:

Assembled at ASE using CRM-1076WA die attach and G631H molding compound material or assembled at MTAI using 3280 die attach and G700HA molding compound material.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	ASE INC. (ASE)	ASE INC. (ASE)	Microchip Technology Thailand (HQ) (MTAI)
Wire material	Au	Au	Au
Die attach material	CRM-1076WA	CRM-1076WA	3280
Molding compound material	G631H	G631H	G700HA
Lead frame material	C7025	C7025	C7025

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying MTAI as an additional assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

August 03, 2019 (date code: 1931)

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



post change parts.

Time Table Summary:

	June 2019					July 2019				August 2019				
Workweek	22	23	24	25	26	27	28	29	30	31	32	33	34	35
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:

June 24, 2019: Issued initial notification.

July 03, 2019: Issued final notification. Attached the qualification report. Provided estimated first ship date EFSD to be on August 03, 2019.

August 24, 2019: Re-issued final notification. Revised the affected CPN list to include parts that are only assembled at ASE.

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

Attachment(s):

[PCN_GBNG-10TTAV974 Qual Report.pdf](#)

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

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Affected Catalog Part Numbers (CPN)

KSZ8041FTL

KSZ8041FTLI

KSZ8041FTLI-TR

KSZ8041FTL-TR

KSZ8041TL

KSZ8041TLI

KSZ8041TLI-TR

KSZ8041TL-TR

SPNY801037

SPNZ801037

SPNZ801037-TR

SPNZ801053

SPNZ801053-TR

SPNZ801087



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: GBNG-10TTAV974

Date
May 28,2019

Qualification of MTAI as an additional assembly site for selected Micrel products of the 0.18 um wafer technology at DBHU available in 48L TQFP (7x7x1.0mm) package.



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MTAI as an additional assembly site for selected Micrel products of the 0.18 um wafer technology at DBHU available in 48L TQFP (7x7x1.0mm) package.
CCB No	3782
CN	ES288018
QUAL ID	Q19049 Rev. A
MP CODE	TKDA1TCQAA02
Part No.	KSZ8041TLI/TR
Bonding No.	BDM-002103 Rev. A
<u>Package</u>	
Type	48L TQFP
Package size	7x7x1.0 mm
Die thickness	11 mils
Die size	61.9 x 54.7 mils
<u>Lead Frame</u>	
Paddle size	200 x 200 mils
Material	C7025
Surface	Ag ring plated
Process	Stamp
Lead Lock	No
Part Number	10104806
Treatment	Roughened
<u>Material</u>	
Epoxy	3280
Wire	Au wire
Mold Compound	G700HA
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI195200001.000	DU02919478616.B00	1913TY9
MTAI195203365.000	DU02919478616.B00	1913DCW
MTAI195203366.000	DU02919478616.B00	1913DCY

Result

Pass Fail _____

48L TQFP assembled by MTAI pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard / Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	

<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test :+25°C and 85°C System: LTX_D1X	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 85°C System: LTX_D1X			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: +85°C System: LTX_D1X		231(0)	0/231	Pass	77 units / lot
	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: LTX_D1X		231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 3.3 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 85°C System: LTX_D1X		231(0)	0/231	Pass	77 units / lot

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 and 85°C System: LTX_D1X	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	
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Bond Strength	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
Data Assembly	Bond Shear (>15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	