Product Change Notification - GBNG-10TTAV974

Date:

24 Jun 2019

Product Category:

Others; Ethernet PHYs

Affected CPNs:

Notification subject:

CCB 3782 Initial 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:
Initial 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 Qualification Completion Date:
July 2019
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:

	June 2019					July 2019				
Workweek	22	23	24	25	26	27	28	29	30	31
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:
June 24, 2019: 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.

Attachment(s):

PCN_GBNG-10TTAV974_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.

Affected Catalog Part Numbers (CPN)

KSZ8041FTL
KSZ8041FTLI
KSZ8041FTLI-TR
KSZ8041FTL-S
KSZ8041FTL-TR
KSZ8041TL
KSZ8041TLI
KSZ8041TLI-S
KSZ8041TLI-TR
KSZ8041TL-TR
SPNY801037
SPNY801049
SPNY801066
SPNY801066-TR
SPNZ801037
SPNZ801037-TR
SPNZ801049
SPNZ801053
SPNZ801053-TR
SPNZ801066-TR
SPNZ801087

QUALIFICATION PLAN SUMMARY

PCN #: GBNG-10TTAV974

Date
April 3, 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.

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

		New Data (new Qual)
Misc.	Assembly site	MTAI
	BD Number	BDM-002103 rev.A
	MP Code (MPC)	TKDA17CQAA02
	Part Number (CPN)	KSZ8041TLI-A4-AI-X
Lead-Frame	Paddle size	200 x 200 mils
	Material	C7025
	DAP Surface Prep	Ag ring plated
	Treatment	Yes
	Process	Stamped
	Lead-lock	No
	Part Number	10104806
	Lead Plating	Matte Tin
	Strip Size	70 x 218 mm
	Strip Density	70 units/strip
Bond Wire	Material	Au
Die Attach	Part Number	3280
	Conductive	Yes
MC	Part Number	G700HA
PKG	PKG Type	TQFP
	Pin/Ball Count	48
	PKG width/size	7x7x1.0 mm
Die	Die Thickness	11 mils
	Die Size	61.9 x 54.7
	Fab Process (site)	0.18um Dongbu

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	Special Instructions
Standard Pb-free Solderability	JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing.	22	5	1	27	> 95% lead coverage	5	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	JESD22B-102E;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	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	24	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	24		5	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp.85ºC,	45	5	1	50	0	10	Must be in progress at time of package release to production, but completion is not required for release to production.
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-020D for package type; Electrical test pre and post stress at +25°C. (MSL1/260)	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.

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	Special Instructions
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	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.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.