Product Change Notification / CADA-02KPFT899

Date:

05-Apr-2022

Product Category:

Clock Buffers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5046 Initial Notice: Qualification of G700LA as a new mold compound material for selected MAX24x8x device family available in 68L WQFN (8x8x0.8mm) package assembled at ASCL assembly site

Affected CPNs:

CADA-02KPFT899_Affected_CPN_04052022.pdf
CADA-02KPFT899_Affected_CPN_04052022.csv

Notification Text:

PCN Status: Initial 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 G700LA as a new mold compound material for selected MAX24x8x device family available in 68L WQFN (8x8x0.8mm) package assembled at ASCL assembly site.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	ASE Group Chung-Li (ASCL)	ASE Group Chung-Li (ASCL)
Wire Material	PdCu/ Cu	PdCu/ Cu
Die Attach Material	EN-4900GC	EN-4900GC
Molding Compound Material	CEL-9240HF10AC	G700LA
Lead-Frame Material	C194	C194

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve manufacturability by qualifying G700LA as a new molding compound material.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: July 2022

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:

	April 2022					>	July 2022					
Workweek	14	15	16	17	18		27	28	29	30	31	32
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: April 5, 2022: 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_CADA-02KPFT899_Qualification 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#: CADA-02KPFT899

Date:
Feb. 2, 2022

Qualification of G700LA as a new mold compound material for selected MAX24x8x device family available in 68L WQFN (8x8x0.8mm) package assembled at ASCL assembly site.

Purpose: Qualification of G700LA as a new mold compound material for selected MAX24x8x device family available in 68L WQFN (8x8x0.8mm) package assembled at ASCL assembly site.

CCB#: 5046

Misc.	Assembly site	ASCL
	BD Number	BD-000487-01
	MP Code (MPC)	X01417MLCA02
	Part Number (CPN)	MAX24287ETK2
	MSL information	MSL3/260
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	260
	Reliability Site	MTAI
Lead-Frame	Paddle size	262x262 mils
	Exposed Pad Size	6.25x6.25 mm
	Material	C194
	DAP Surface Prep	Double ring
	Treatment	Non-Rough
	Process	Etched
	Lead-lock Design (with locking hole?)	No
	Part Number	0068QN033F01
	Lead Plating	Matte tin
Bond Wire	Material	CuPd
Die Attach	Part Number	EN-4900GC
	Conductive	Yes
MC	Part Number	G700LA
PKG	PKG Type	WQFN
	Pin/Ball Count	68L
	PKG width/size	8x8x0.8mm

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	Start Date	End Date	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; 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			ASEM	MTAI	WQFN	Standard Pb-free solderability is the requirement.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5			ASEM	MTAI	WQFN	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5			ASEM	MTAI	WQFN	30 bonds from a min. 5 devices.
Wire Sweep										ASEM	MTAI	WQFN	Required for any reduction in wire bond thickness.
Physical Dimmensions	Measure per JESD22 B100 and B108	10	0	3	30		5			ASEM	MTAI	WQFN	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5			ASEM	MTAI	WQFN	

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	Start Date	End Date	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
HTSL (High Temp Storage Life)	+175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25C and hot temp 85°C.	45	5	1 3 (Cu wire qual)	50 150 (Cu wire qual)	0	10			ASEM	MTAI	WQFN	Must be in progress at time of package release to production, but completion is not required for release to production. 3 lots are required for Cu wire qual.
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 and hot temp 85°C. MSL3 @ 260 °C	231	15	3	738	0	15			ASEM	MTAI	WQFN	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 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.
UHAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10			ASEM	MTAI	WQFN	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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	Start Date	End Date	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Temp Cycle	-65°C to +150°C fo**r** 500 cycles. Electrical test pre and post stress at hot temp; **85°C,** 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15			ASEM	MTAI	WQFN	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Affected Catalog Part Numbers (CPN)

MAX24188ETK2
MAX24188ETK2T
MAX24287ETK2
MAX24287ETK2T
MAX24288ETK2
MAX24288ETK2T