Product Change Notification / MFOL-06JTCQ469

Date:

07-Aug-2023

Product Category:

Analog to Digital Converters

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6300 Initial Notice: Qualification of ASEK as an additional assembly site for selected MCP356xx and MCP346xx device families available in 20L UQFN (3x3x0.55mm) package.

Affected CPNs:

MFOL-06JTCQ469_Affected_CPN_08072023.pdf
MFOL-06JTCQ469_Affected_CPN_08072023.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 ASEK as an additional assembly site for selected MCP356xx and MCP346xx device families available in 20L UQFN (3x3x0.55mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site		Lingsen Precision Industries, Taiwan. (LPI)	Lingsen Precision Industries, Taiwan. (LPI)	ASE Inc. (ASEK)
Wire Material		Au	Au	Au
Die Attach Material		8352L	8352L	FH-900
Molding Compound Material		G770HT	G770HT	CEL-9240HF10AKI2-U
Lead-Frame Material	Material	C7025	C7025	C7025
	Paddle Size	77x77 mils	77x77 mils	76X76 mils
	Treatment	None	None	Roughened
DAP Surface Prep		Spot	Spot	Double Ring Ag

Impacts to Data Sheet: None

Change Impact: None

Reason for Change: To improve on-time delivery performance by qualifying ASEK as an additional assembly site.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: December 2023

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:

	August 2023					**>**	**December 2023**				
Workweek	31	32	33	34	35		49	50	51	52	53
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: August 07, 2023: 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_MFOL-06JTCQ469_Pre and Post_Change Summary.pdf
PCN_MFOL-06JTCQ469_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)

MCP3561T-E/NC
MCP3562T-E/NC
MCP3564T-E/NC
MCP3461T-E/NC
MCP3462T-E/NC
MCP3464T-E/NC
MCP3561RT-E/NC
MCP3562RT-E/NC
MCP3564RT-E/NC
MCP3461RT-E/NC
MCP3462RT-E/NC
MCP3464RT-E/NC

QUALIFICATION PLAN SUMMARY

RELIABILITY LABORATORY

PCN #: MFOL-06JTCQ469

Date:
May 23, 2023

Qualification of ASEK as an additional assembly site for selected MCP356xx and MCP346xx device families available in 20L UQFN (3x3x0.55mm) package.

Purpose: Qualification of ASEK as an additional assembly site for selected MCP356xx and MCP346xx device families available in 20L UQFN (3x3x0.55mm) package.

CCB No. 6300

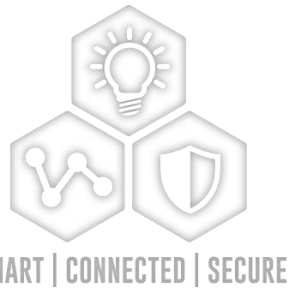
Misc.	**Assembly site**	ASEK
	BD Number	BD-001540-01
	MP Code (MPC)	TUDA1YQDXC00
	Part Number (CPN)	MCP3564T-E/NC
	MSL information	MSL1 260
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTAI
Lead-Frame	**Paddle size**	76X76 mils
	Material	C7025
	DAP Surface Prep	Double Ring Ag
	Treatment	Roughened
	Process	Etched
	Lead-lock	No
	Part Number	1108800101 (A32240-0)
	Lead Plating	Matte Tin
	Strip Size	78X258
	Strip Density	1500 units/strip
Bond Wire	**Material**	Au
Die Attach	**Part Number**	FH-900
	Conductive	No
MC	**Part Number**	CEL-9240HF10AKI2-U
PKG	**Package Type**	UQFN
	Pin/Ball Count	20
	PKG width/size	3x3x0.55mm

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	ATE Test Site	REL Test Site	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		MTAI	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.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5		MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5		MTAI	30 bonds from a min. 5 devices.
Wire Sweep									MTAI	Required for any reduction in wire bond thickness.
Physical Dimens	Measure per JESD22 B100 and B108	10	0	3	30		5		MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5		MTAI	
Preconditioning - Required for surface mount devices	JESD22-A113. +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. MSL1/260	231	15	3	738	0	15	MTAI	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test. Post-stress Electrical Test.
HAST	JESD22-A110. +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 (125°C).	77	5	3	246	0	10	MTAI	MTAI	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	ATE Test Site	REL Test Site	Special Instructions
UHAST	JESD22-A118. +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp (125°C); 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

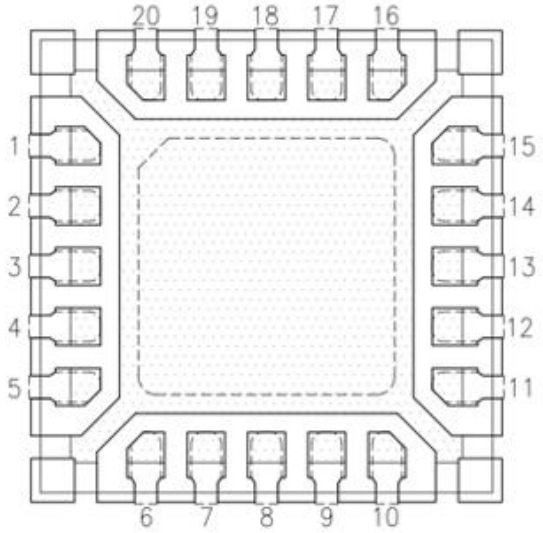
CCB 6300
Pre and Post Change Summary
PCN #: MFOL-06JTCQ469

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



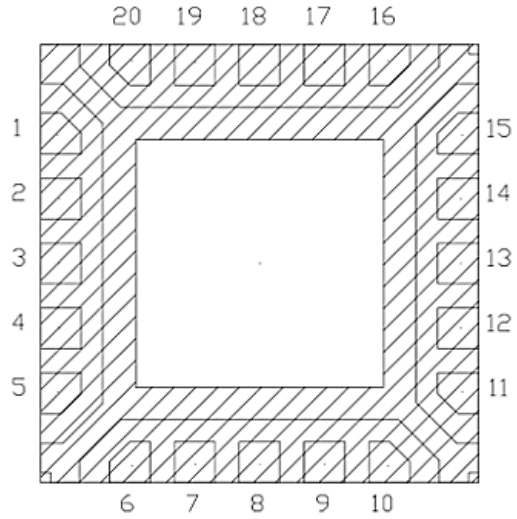
Pre and Post Change – Lead Frame Comparison

LPI



Lead Frame Material	C7025
Lead Frame Treatment	None
Lead Frame Paddle Size	77x77 mils
DAP Surface Prep	Spot

ASEK



Lead Frame Material	C7025
Lead Frame Treatment	Roughened
Lead Frame Paddle Size	76x76 mils
DAP Surface Prep	Double Ring Ag

Note: Not to Scale

MICROCHIP