Product Change Notification / ALAN-24BGXP256

Date:

30-Jun-2021

Product Category:

Clock and Timing - Oscillators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4661 Initial Notice: Qualification of STAR as an additional assembly site for selected DSC812xxx, DSC110xxx, and DSC112xxx device families available in 6L VDFN (7x5x0.9mm) package

Affected CPNs:

ALAN-24BGXP256_Affected_CPN_06302021.pdf
ALAN-24BGXP256_Affected_CPN_06302021.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 STAR as an additional assembly site for selected DSC812xxx, DSC110xxx, and DSC112xxx device families available in 6L VDFN (7x5x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Location		UTAC Thai Limited (UTL) (NSEB)	UTAC Thai Limited (UTL) (NSEB)	Stars Microelectronics (Thailand) Public Company Limited (STAR)
Bonding Wire material		Au	Au	Au
Die Attach material #1		HR-5104 (DAF)	HR-5104 (DAF)	HR-5104 (DAF)
Die Attach material #2		2200D	2200D	2200D
Die Coat material		JCR6109	JCR6109	JCR6109
Molding compound material		G700LTD	G700LTD	G700LTD
Lead Frame	**Material**	C194	C194	C194
	DAP Surface Prep	Selective PPF	Selective PPF	Full PPF
	Lead-lock	Yes	Yes	No
		See pre and post change comparison		

Impacts to Data Sheet: None

Change Impact: None

Reason for Change: To improve manufacturability by qualifying STAR as an additional assembly site

Change Implementation Status: In Progress

Estimated Qualification Completion Date: December 2021

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 2021					->	December 2021				
Workweek	23	24	25	26	27		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:June 30, 2021: 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_ALAN-24BGXP256_Pre and Post Change_Summary.pdf
PCN_ALAN-24BGXP256_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)

DSC8121NI2
DSC8122NI2
DSC8123NI2
DSC8124NI2
DSC1101NI1-125.0062
DSC1101NI1-156.2500
DSC1101NI5-100.0000
DSC1103NI2-400.0000
DSC1121NI2-018.4320
DSC1122NI2-150.0000
DSC1123NI1-100.0000
DSC1123NI1-125.0000
DSC1123NI2-125.0000
DSC1123NI2-150.0000
DSC1123NI2-312.5000
DSC1101NI5-025.0000
DSC8122NI5
DSC1101NI5-020.0000
DSC1101NI5-012.8000
DSC1101NI5-016.3840
DSC1124NI1-100.0000
DSC1124NI1-156.2500
DSC1104NI2-100.0000
DSC1122NI5-025.0020
DSC1122NI2-050.0000
DSC1103NI2-125.0000
DSC1121NI1-100.0000
DSC1121NI2-125.0000
DSC1121NI2-025.0000
DSC1101NI1-050.0000
DSC1102NI5-156.2500
DSC1123NI1-156.2500
DSC1122NI2-156.2500
DSC1103NI2-148.5000
DSC1103NI2-156.2500
DSC1101NI5-018.7500
DSC1122NI2-148.5000
DSC1123NI2-200.0000
DSC1123NI5-100.0000
DSC1123NI5-125.0000
DSC1123NI5-156.2500
DSC1123NI5-322.2656
DSC1101NI2-050.0000
DSC1103NI1-135.0000
DSC1122NI5-025.0007
DSC1123NI3-050.0015

DSC1103NI5-150.0000
DSC1123NI2-100.0000
DSC1122NI5-200.0000
DSC1102NI5-400.0000
DSC1102NI5-200.0000
DSC1101NI2-025.0000
DSC1101NI2-018.7500
DSC1103NI5-300.0000
DSC1103NE1-125.0000
DSC1122NE1-025.0000
DSC1122NE2-156.2500
DSC1124NE1-100.0000
DSC1122NE1-133.3330
DSC1122NE1-150.0000
DSC1123NE2-156.2500
DSC1123NE2-125.0000
DSC1123NL2-100.0000
DSC1102NE1-148.5000
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DSC1123NL5-125.0000
DSC1123NL5-100.0000
DSC1121NL1-025.0000
DSC1101NL3-PROG
DSC1101NL5-PROG
DSC1100NL3-PROG
DSC1100NL5-PROG
DSC1122NL2-025.0006
DSC1103NL2-147.4560
DSC1103NL2-098.3040
DSC1123NE1-200.0000
DSC1103NL5-125.0000
DSC1103NL2-100.0000
DSC1103NL2-106.2500
DSC1103NL2-135.0000
DSC1102NE3-075.0000
DSC1103NE2-148.5000
DSC1123NL1-148.5000
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DSC1122NE2-150.0000T
DSC1122NE2-156.2500T
DSC1124NE1-100.0000T
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DSC1122NE1-133.3330T
DSC1122NE1-150.0000T
DSC1123NE2-156.2500T
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DSC1123NL2-100.0000T

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DSC1123NI3-050.0015T
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DSC1123NI2-100.0000T
DSC1122NI5-200.0000T
DSC1102NI5-400.0000T
DSC1102NI5-200.0000T
DSC1101NI2-025.0000T
DSC1101NI2-018.7500T
DSC1103NI5-300.0000T

CCB 4661

Pre and Post Change Summary

PCN# ALAN-24BGXP256

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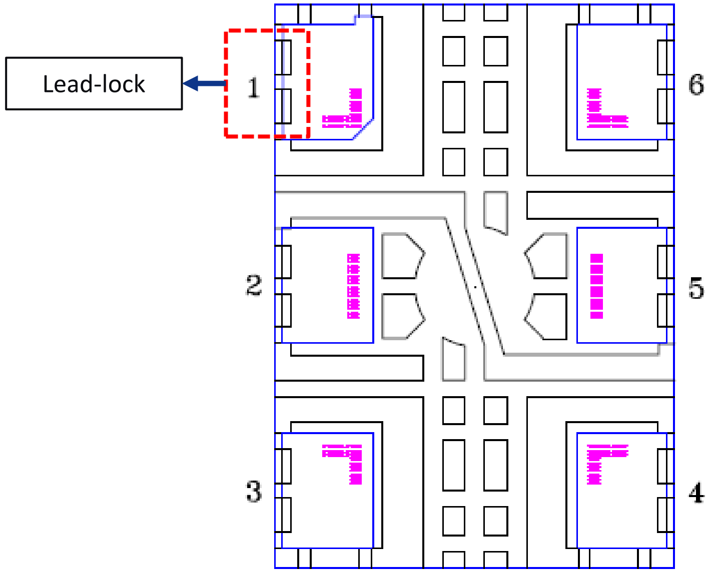
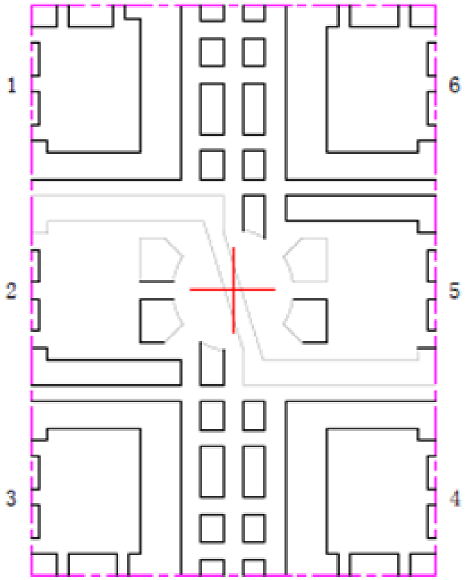
SMART | CONNECTED | SECURE

Pre and Post Change Summary

Pre Change	Post Change



Assembly Site	NSEB
Lead-lock	Yes
DAP Surface Prep	Selective PPF



Assembly Site	STAR
Lead -Lock	No
DAP Surface Prep	Full PPF

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QUALIFICATION PLAN SUMMARY

PCN #: ALAN-24BGXP256

Date
June 24, 2021

Qualification of STAR as an additional assembly site for selected DSC812xxx, DSC110xxx, and DSC112xxx device families available in 6L VDFN (7x5x0.9mm) package. This is Q100 grade 1 qualification.

Purpose: Qualification of STAR as an additional assembly site for selected DSC812xxx, DSC110xxx, and DSC112xxx device families available in 6L VDFN (7x5x0.9mm) package. This is Q100 grade 1 qualification.

Misc.	Assembly site	STAR
	BD Number	BDM-002909A
	MP Code (MPC)	3610Q5HPA003
	Part Number (CPN)	D50N-M3
	MSL information	MSL-1@260C
	Assembly Shipping Media (T/R, Tube/Tray)	Tube
	Base Quantity Multiple (BQM)	50
	Reliability Site	MTAI
	CCB No.	4661
Lead-Frame	Paddle size	COL
	Material	C194
	DAP Surface Prep	Full PPF
	Treatment	Yes
	Process	Etched
	Lead-lock	No
	Part Number	MLEP00009MIC-T
	Lead frame Thickness	8 mils
	Lead Plating	NiPdAu
	Strip Size	51x228mm
	Strip Density	160 units
Bond Wire	Material	Au
Die Attach	Part Number	HR-5104 (DAF), 2200D
	Conductive	Non conductive, Conductive
Die coat	Part Number	JCR6109
MC	Part Number	G700LTD
PKG	PKG Type	VDFN
	Pin/Ball Count	6
	PKG width/size	7x5x0.9mm

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	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 hours of 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	5		STAR	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5	0	5		STAR	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30	0	5		STAR	
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5		STAR	

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	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
HTSL (High Temp Storage Life)	JESD22-A103 +125°C, +150°C or +175°C	Grade 1: 500 hrs (+175°C)	Grade 1: +25°C, +125°C	45	5	1	50	0	21 - 83	NSEB	MTAI	Spares should be properly identified.
Preconditioning - Required for surface mount devices	J-STD-020JESD22-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. MSL-1@260C		Grade 1: +25°C, +125°C	231	15	3	738	0	15	NSEB	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs or	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C, +125°C	77	5	3	246	0	10 - 14	NSEB	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C	77	5	3	246	0	10	NSEB	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	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
Temp Cycle	JESD22-A104 -65°C to +150°C	Grade 1: 500 cycles (-65ºC to 150ºC)	Grade 1: +125	77	5	3	246	0	15 - 60	NSEB	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.