

Product Change Notification: CAAN-05DPRL047

Date:

05-Sep-2024

Product Category:

USB Hubs

Notification Subject:

CCB 6823 Final Notice: Qualification of ATK as a new assembly site for USB3503A-1-GL-TR and USB3503AI-1-GL-TR catalog part numbers (CPN) available in 25L WLCSP (1.97x1.97x0.57mm) package.

Affected CPNs:

CAAN-05DPRL047_Affected_CPN_09052024.pdf CAAN-05DPRL047_Affected_CPN_09052024.csv

Notification Text:

PCN Status: Final 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 ATK as a new assembly site for USB3503A-1-GL-TR and USB3503AI-1-GL-TR catalog part numbers (CPN) available in 25L WLCSP (1.97x1.97x0.57mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	NEPES Corporation Korea	Amkor Technology Korea (K4), INC
	(NEP)	(ATK)
Solder Ball Material	SAC305	SAC405

Backside Coating	Lintec 25um	LC2850

Impacts to Data Sheet:None

Change ImpactNone

Reason for Change:To improve on-time delivery performance by qualifying ATK as a new assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date:September 20, 2024 (date code: 2438)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	March 2024			>	Ś	Septe	mbei	r 202 /	4		
Workweek	10	11	12	13	14		36	37	38	39	40
Initial PCN Issue Date		Х									
Qual Report Availability							х				
Final PCN Issue Date							х				
Estimated Implementation Date									х		

Method to Identify Change: Traceability code

Qualification Report:Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: March 14, 2024: Issued initial notification.

September 02, 2024: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on September 20, 2024.

September 05, 2024: Re-issued final notification to update Pre and Post change summary and reflect correct solder ball material from SAC305 to SAC405.

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

Attachments:

PCN_CAAN-05DPRL047_Qual Report.pdf

Please contact your local **Microchip sales office** with questions or concerns regarding this notification.

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If you wish to <u>change your PCN profile</u>, <u>including opt out</u>, 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.

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Affected Catalog Part Numbers (CPN)

USB3503A-1-GL-TR USB3503AI-1-GL-TR



QUALIFICATION REPORT SUMMARY RELIABILITY LABORATORY

PCN#: CAAN-05DPRL047

Date: August 9, 2024

Qualification of ATK as a new assembly site for USB3503A-1-GL-TR and USB3503AI-1-GL-TR catalog part numbers (CPN) available in 25L WLCSP (1.97x1.97x0.57mm) package.



Purpose	Qualification of ATK as a new assembly site for USB3503A-1-GL-TR and USB3503AI-1-GL-TR catalog part numbers (CPN) available in 25L WLCSP (1.97x1.97x0.57mm) package.
CN	E000227243
QUAL ID	R2400610 Rev. A
MP CODE	XG002SEUXAA0
Part No.	USB3503A-1-GL-TR
Bonding No.	BD-002165-02_25_WLCSP_EUX_ATK
CCB No.	6823
Package	
Туре	25L WLCSP
Package size	1.97 x 1.97 x 0.57mm
Polymer Material	HD4100
Polymer thickness	5 um
UBM Deposition Method	Sputter + Plated
UBM Thickness	0.1Ti/0.2Cu/8.6Cu
UBM Opening Diameter	230um
RDL Deposition method	Sputter + Plated
RDL Thickness	0.1Ti/0.2Cu/3Cu
<u>Solder ball</u>	
Material	SAC405
Ball diameter	250 um
Ball pitch	400 um



Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ATK-245000032.000	GF06914129237.300	24111VD
ATK-245000030.000	GF06914129237.300	24111V9
ATK-245000031.000	GF06914129237.300	24111VB

Result X Pass Fail

25L WLCSP (1.97x1.97x0.57mm) assembled by ATK 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-020E standard.

PACKAGE QUALIFICATION REPORT								
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks		
Precondition Prior Perform Poliobility Tooto	Electrical Test: +85°C System: EX_DIGITAL	JESD22- A113	231(0)	0/231	Pass	Good Devices		
(At MSL Level 1)	Bake 150°C, 24 hrs. System:GUANGZHOUESPEC Environment Equipment, PH201M	JIP/ IPC/JEDEC J-STD-020E		231				
	85°C/85%RH Moisture Soak 168 hrs. System: ESPEC PR-2kp 3x Convection-Reflow 265°C max System: BTU Pyramax reflow oven			231				
	Electrical Test: +85°C System: EX_DIGITAL		231(0)	0/231	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 Electrical Test: +85°C System: EX_DIGITAL	JESD22- A104	231(0)	0/231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HIRAYAMA PR422R8 Electrical Test: +85°C	JESD22- A118	231(0)	0/231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot	
High Temperature Storage Life	System: EX_DIGITAL Stress Condition: Bake 150°C, 1000 hrs. System: GUANGZHOU ESPEC Environment Equipment, PH201M Electrical Test: +85°C System: EX_DIGITAL	JESD22- A103	45(0)	0/45	Pass	45 units	
High Temp Bake and Low Speed Ball Shear	Stress Condition: Bake 150°C, 1000 hrs. System: GUANGZHOU ESPEC Environment Equipment, PH201M Electrical Test: 85°C System: EX_DIGITAL	JESD22- B117	30(0)	0/30 0/30	Pass	30 shears	