



Product Change Notification: MFOL-21VSRV196

Date:

28-Jul-2026

Product Category:

Linear Op Amps, Linear Regulators, Switching Regulators

Notification Subject:

CCB 8392 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.

Affected CPNs:

[MFOL-21VSRV196_Affected_CPN_07282026.pdf](#)

[MFOL-21VSRV196_Affected_CPN_07282026.csv](#)

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 palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.

Pre and Post Summary Changes:

	Pre Change	Post Change	Change (Yes/No)
Assembly Site	Microchip Technology Thailand (Branch) (MMT)	Microchip Technology Thailand (Branch) (MMT)	No

Wire Material	Au	CuPdAu	Yes
Die Attach Material	QMI519 (PFAS-free)	QMI519 (PFAS-free)	No
Molding Compound Material	G700LTD	G700LTD	No
Lead-Frame Material	A194	A194	No

Impacts to Datasheet: None

Change Impact: None

Reason for Change: To improve manufacturability by qualifying palladium coated copper with gold flash (CuPdAu) as a new bond wire material at MMT assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: 12 October 2026 (date code: 2642)

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

Timetable Summary:

	July 2026					>	October 2026				
Work Week	27	28	29	30	31		40	41	42	43	44
Qual Report Availability					X						
Final PCN Issue Date					X						
Estimated Implementation Date									X		

Method to Identify Change: Traceability Code

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

Note: This is a qualification by similarity (QBS) to CCB# 4439, 4732 and 7907.

Revision History: July 28, 2026: Issued final notification.

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

Attachments:

[PCN_MFOL-21VSRV196_Qual_Report_CCB4439.pdf](#)

[PCN_MFOL-21VSRV196_Qual_Report_CCB4732.pdf](#)

[PCN_MFOL-21VSRV196_Qual_Report_CCB7907.pdf](#)

Please contact your local **[Microchip sales office](#)** with questions or concerns regarding this notification.

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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):

TC1301A-EGAVMFTR
TC1301A-UWFVMFTR
TC1301A-DFAVMF
TC1301A-SFAVMFTR
TC1301A-UHAVMFTR
TC1301A-UHAVMF
TC1302A-ISVMF
TC1301A-UPBVMF
TC1302A-ISVMFTR
TC1302A-FFVMFTR
TC1301A-UPBVMFTR
TC1301A-AAAVMF
TC1301A-APAVMF
TC1301A-NICVMFTR
TC1301A-FGAVMFTR
TC1301A-FFEVMFTR
TC1301A-FFAVMFTR
TC1302A-IPVMF
TC1302A-HPVMF
TC1301A-FSAVMF
TC1301A-FHAVMF
TC1301A-FFAVMF
TC1302A-IAVMFTR
TC1301A-FGAVMF
TC1302A-HPVMFTR
TC1301A-SGBVMF
TC1301A-SFAVMF
TC1301A-PHEVMF
TC1301A-PGAVMF
TC1301A-FDAVMFTR
TC1301A-EDAVMFTR
TC1301A-UFEVMF

MFOL-21VSRV196 - CCB 8392 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.

TC1301A-PGAVMFTR
TC1301A-NSBVMFTR
TC1301A-FEAVMFTR
TC1301A-APAVMFTR
TC1301A-AAAVMFTR
TC1301A-UWFVMF
TC1301A-FEAVMF
TC1301A-FDAVMF
TC1301A-EGAVMF
TC1301A-EFAVMF
TC1301A-EDAVMF
TC1302A-DTVMF
TC1301A-NSBVMF
TC1301A-NICVMF
TC1301A-FSAVMFTR
TC1301A-EFAVMFTR
TC1301A-ADAVMFTR
TC1301A-ADAVMF
TC1302A-IPVMFTR
TC1301A-FHAVMFTR
TC1301A-AHAVMF
TC1301A-AHAVMFTR
TC1301A-SSBVMF
TC1301B-GFDVMFTR
TC1301B-GDDVMFTR
TC1302B-FTVMFTR
TC1302B-FSVMFTR
TC1302B-FFVMFTR
TC1301B-FEAVMFTR
TC1301B-GABVMFTR
TC1301B-UPFVMFTR
TC1302B-PHVMFTR
TC1302B-EIVMFTR
TC1301B-EGAVMFTR
TC1302B-SDVMFTR
TC1301B-GWDVMFTR

TC1301B-GPDVMFTR
TC1302B-IPVMFTR
TC1302B-ICVMFTR
TC1301B-HPEVMFTR
TC1301B-HWEVMFTR
TC1301B-AIAVMFTR
TC1301B-UWFVMF
TC1301B-IECVMF
TC1301B-FGAVMFTR
TC1302B-GDVMF
TC1302B-FSVMF
TC1301B-EDAVMFTR
TC1302B-DTVMF
TC1301B-FDAVMF
TC1302B-FPVMFTR
TC1301B-FHAVMFTR
TC1301B-FFAVMFTR
TC1302B-SDVMF
TC1302B-IPVMF
TC1301B-UPFVMF
TC1301B-FEAVMF
TC1301B-GDDVMF
TC1301B-GABVMF
TC1302B-FTVMF
TC1302B-FPVMF
TC1301B-FFAVMF
TC1302B-FFVMF
TC1301B-GGDVMF
TC1302B-DPVMFTR
TC1302B-GPVMFTR
TC1301B-DAAVMF
TC1301B-CCAVMF
TC1301B-APAVMF
TC1301B-AIAVMF
TC1301B-EFAVMFTR

MFOL-21VSRV196 - CCB 8392 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.

TC1301B-FDAVMFTR

TC1301B-FAAVMFTR

TC1301B-HWEVMF

TC1301B-EGAVMF

TC1302B-GDVMFTR

TC1301B-EFAVMF

TC1301B-EDAVMF

TC1302B-DSVMF

TC1302B-DRVMF

TC1301B-DPAVMF

TC1301B-FHAVMF

TC1301B-FGAVMF

TC1302B-DPVMF

TC1302B-ICVMF

TC1301B-HPEVMF

TC1301B-GPDVMF

TC1301B-GFDVMF

TC1301B-GGDVMFTR

TC1301B-UPBVMFTR

TC1301B-FSAVMFTR

TC1302B-AFVMFTR

TC1301B-UUAVMFTR

TC1301B-IECVMFTR

TC1302B-IAVMFTR

TC1301B-DDAVMFTR

TC1301B-HOEVMF

TC1302B-PFVMFTR

TC1302B-PFVMF

TC1302B-EIVMF

TC1302B-IAVMF

TC1302B-PHVMF

TC1301B-FAAVMF

TC1302B-DTVMFTR

TC1301B-UPBVMF

MCP1726T-ADJE/MF

MCP1726T-5002E/MF

MCP1726T-1802E/MF

MCP1726-2502E/MF

MCP1726T-1202E/MF

MCP1726T-2502E/MF

MCP1726-ADJE/MF

MCP1726-0802E/MF

MCP1726-1802E/MF

MCP1726-1202E/MF

MCP1726T-3302E/MF

MCP1726T-3002E/MF

MCP1726T-0802E/MF

MCP1726-5002E/MF

MCP1726-3302E/MF

MCP1726-3002E/MF

MCP622T-E/MF

MCP622-E/MF

MCP652T-E/MF

MCP652-E/MF

MCP632-E/MF

MCP632T-E/MF

MCP662T-E/MF

TC1302B-HPVMF

TC1301B-GWDVMF

TC1301B-UWFMFTR

TC1302B-HPVMFTR

TC1301B-FSAVMF

TC1301B-DDAVMF

TC1302B-AFVMF

TC1301B-UUAVMF

TC1301B-DAAVMFTR

TC1301B-CCAVMFTR

MCP662-E/MF

MCP1602-250I/MF

MCP1602T-250I/MF

MCP1602-FIXI/MF

MFOL-21VSRV196 - CCB 8392 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.

MCP1602-ADJI/MF

MCP1602-330I/MF

MCP1602T-FIXI/MF

MCP1602T-ADJI/MF

MCP1602T-330I/MF

MCP1602T-180I/MF

MCP1602T-150I/MF

MCP1602T-120I/MF

MCP1602-180I/MF

MCP1602-150I/MF

MCP1602-120I/MF

TC1301B-APAVMFTR

TC1301B-HOEVMFTR

TC1302B-GPVMF

TC1302B-DSVMFTR

TC1302B-DRVMFTR

TC1301B-DPAVMFTR

MCP1612T-ADJI/MF

MCP1612-ADJI/MF

TC1301A-PHEVMFTR

TC1302A-DTVMFTR

TC1301A-DFAVMFTR

TC1301A-SGBVMFTR

TC1301A-UFEVMFTR

TC1301A-SSBVMFTR

TC1302A-FFVMF

TC1302A-IAVMF

TC1301A-FFEVMF



QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: MFOL-21VSRV196

Date:
April 22, 2026

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site. This is a Q006 Grade 1 Qualification.



MICROCHIP Package Qualification Report

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site. This is a Q006 Grade 1 Qualification.

CCB No. 7907

<u>Misc.</u>	Assembly site	MMT
	BD Number	BD-003900-01
	MP Code (MPC)	669024A6XS00
	Part Number (CPN)	25CSM01-E/MF
	Assembly Shipping Media (T/R, Tube/Tray)	T&R
	Base Quantity Multiple (BQM)	3300
<u>Lead-Frame</u>	Paddle size	173 x 173 mils
	Material	A194
	DAP Surface Prep	Bare Cu
	Treatment	Roughened
	Process	Etched
	Lead-lock	Locking hole
	Part Number	10100879
	Lead Plating	Matte tin
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	QMI519
	Conductive	Yes
<u>MC</u>	Part Number	G700LTD
<u>PKG</u>	PKG Type	DFN-S
	Pin/Ball Count	8
	PKG width/size	6x5x0.9 mm



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Package Qualification Report

Manufacturing Information:

Assembly Lot No.
MMT-263301084.000
MMT-263301129.000
MMT-263301130.000

Conclusion:

Qualification of 66902 mask / 25CSM01-E/MF product / CuPdAu wire in 8L DFN-S 6x5x0.9 mm package at MMT site is qualified for MSL1 at 260°C as per JEDEC J-STD-020 standard and is passed in accordance to Specified JEDEC and Mil Standards



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Package Qualification Report

Moisture Soak Precondition Prior to Stresses

Test Method	JESD22-A113, JEDEC J-STD-020		
Test Condition	MSL1: 150°C 24 hours Bake, 168 hours Moisture Soak at 85°C/85%RH, 3x Reflow at 260°C		
Required Sample Size	231 units each lot / 3 lots;		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/231	0/231	0/231
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		



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Package Qualification Report

High Temp Storage

Test Method	JESD22-A103		
Test Condition	175°C / 500 hours		
Required Sample Size	45 units each lot / 3 lots;		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/45	0/45	0/45
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		

High Temp Storage

Test Method	JESD22-A103		
Test Condition	175°C / 1000 hours		
Required Sample Size	45 units each lot / 3 lots;		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/45	0/45	0/45
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		



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Package Qualification Report

Temperature Cycling

Test Method	JESD22-A104		
Test Condition	-55°C / +150°C Air to Air / 1000 Cycles		
Required Sample Size	77 units each lot / 3 lots; WBP/WBS		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
WBP (Fail / Pass)	0/3	0/3	0/3
WBS (Fail / Pass)	0/3	0/3	0/3
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		

Temperature Cycling

Test Method	JESD22-A104		
Test Condition	-55°C / +150°C Air to Air / 2000 Cycles		
Required Sample Size	77 units each lot / 3 lots; WBP/WBS		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
WBP (Fail / Pass)	0/3	0/3	0/3
WBS (Fail / Pass)	0/3	0/3	0/3
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		



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Package Qualification Report

Biased HAST

Test Method	JESD22-A110		
Test Condition	+130°C / 85%RH / 96 hours / Bias Voltage: 5.6V		
Required Sample Size	77 units each lot / 3 lots; WBP/WBS		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
WBP (Fail / Pass)	0/3	0/3	0/3
WBS (Fail / Pass)	0/3	0/3	0/3
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		

Biased HAST

Test Method	JESD22-A110		
Test Condition	+130°C / 85%RH / 192 hours / Bias Voltage: 5.6V		
Required Sample Size	77 units each lot / 3 lots; WBP/WBS		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
WBP (Fail / Pass)	0/3	0/3	0/3
WBS (Fail / Pass)	0/3	0/3	0/3
Electrical Test Tester: NEXTEST_PT	25°C, 85°C, and 125°C		
Result:	Pass		



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Package Qualification Report

Unbiased HAST

Test Method	JESD22-A118		
Test Condition	+130°C / 85%RH / 96 hours		
Required Sample Size	77 units each lot / 3 lots;		
Lot ID	R2501550-1 MMT-263301084.000	R2501550-2 MMT-263301129.000	R2501550-3 MMT-263301130.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
Electrical Test Tester: NEXTEST_PT	25°C		
Result:	Pass		

Solderability (0 Hr) Method 1: Dip and Look

Test Method	J-STD-002 / JESD22B-102
Test Condition / Criteria	Pb-free 8 hours Steam age. Dip at 245°C, 100% leads >95% lead coverage
Required Sample Size	22 units / 1 lot
Visual Result (Fail / Pass)	0/22 - Pass

Physical Dimension (0Hr)

Test Method	JESD22 B100 and B108
Test Criteria	Within package diagram dimension
Required Sample Size	10 units each lot / 3 lots
Result (Fail / Pass)	0/30 - Pass



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Package Qualification Report

Wire Pull

Test Method	Mil. Std. 883-2011
Test Criteria	Bond Strength Data Assembly
Required Sample Size	5 units / 1 lot
Result (Fail / Pass)	0/5 - Pass

Bond Shear

Test Method	CDF-AEC-Q100-001
Test Criteria	Bond Strength Data Assembly
Required Sample Size	5 units / 1 lot
Result (Fail / Pass)	0/5 – Pass



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: MFOL-21VSRV196

Date:
January 07, 2021

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site.
CN	ES349645
QUAL ID	R2000836 Rev. A
MP CODE	DE0244M8XAXF
Part No.	PIC12F683-E/MD
Bonding No.	BDM-002739 Rev. A
CCB No.	4439
<u>Package</u>	
Type	8L DFN
Package size	4x4x0.9 mm
<u>Lead Frame</u>	
Paddle size	114 x 146 mils
Material	A194
Surface	Ag selective plated on paddle
Process	Etched
Lead Lock	Yes
Part Number	10100845
<u>Material</u>	
Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	Matte Sn



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-213001957.000	TMPE219226894.210	2043G35
MMT-218001958.000	TMPE219226894.210	2043G36
MMT-213001569.000	TMPE219226894.210	2043CYA

Result

☒

Pass

☐

Fail

☐

8L DFN (4x4x0.9 mm) assembled by MMT 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test: +25°C and 125°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 125°C System: J750			0/693	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: +125°C System: J750 Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +125°C System: J750 Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
				231		
			231(0)	0/231	Pass	
			15 (0)	0/15	Pass	
			15 (0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: J750 Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X Electrical Test: +25°C System: J750	JESD2 2-A118		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
				231		
			231(0)	0/231	Pass	
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.0 Volts System: HAST 6000X Electrical Test: +25°C and 125°C System: J750 Stress Condition: +130°C/85%RH, 192 hrs. Bias Volt: 5.0 Volts System: HAST 6000X Electrical Test: +25°C and 125°C System: J750	JESD2 2-A110		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
				231		
			231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test: +25°C and 125°C System: J750	JESD22-A103	45(0)	45 0/45	 Pass	45 units
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	Mil. Std. 883-2011 CDF-AEC- Q100-001	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: MFOL-21VSRV196

Date:
October 6, 2021

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site. This a Q006 qualification.



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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP1612, TC1301A, TC1302A, TC1301B, TC1302B, MCP1726, MCP622, MCP652, MCP632, MCP662, and MCP1602 device families available in 8L DFN (3x3x0.9mm) package at MMT assembly site. This a Q006 qualification.
CN	ES359035
QUAL ID	R2100665 Rev. A
MP CODE	A7CJ14B3XA00
Part No.	MCP6031-E/MC
Bonding No.	BDM-002966 Rev. A
CCB No.	4732
<u>Package</u>	
Type	8L DFN
Package size	2 x 3 x 0.9 mm
<u>Lead Frame</u>	
Paddle size	75 x 67 mils
Material	C194
Surface	Bare Cu
Process	Etched
Lead Lock	Yes
Part Number	10100852
<u>Material</u>	
Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	Matte Sn



MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-221102373.000	TMPE221475584.100	2123R6P
MMT-221200863.000	TMPE221475584.100	2124TPP
MMT-221200864.000	TMPE221475584.100	2124TQG

Result

☒ Pass ☐ Fail ☐ _____

8L DFN (2x3x0.9 mm) assembled by MMT 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
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020E)	IPC/JEDEC C J-STD- 020E	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests (At MSL Level 1)</u>	Electrical Test: +25°C, 85°C and 125°C System: ETS300	JESD22- A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C, 85°C and 125°C System: ETS300			0/693	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	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 85°C and 125°C System: ETS300		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (>2.5 grams) Bond Shear (>15.00 grams)		45 (0)	0/45	Pass	
	Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H		231			
	Electrical Test: + 85°C and 125°C System: ETS300		231 (0)	0/231	Pass	
	Bond Strength: Wire Pull (>2.5 grams) Bond Shear (>15.00 grams)		45 (0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: +25°C, 85°C and 125°C System: ETS300 Bond Strength: Wire Pull (>2.5 grams) Bond Shear (>15.00 grams) Stress Condition: +130°C/85%RH, 192 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: +25°C, 85°C and 125°C System: ETS300 Bond Strength: Wire Pull (>2.5 grams) Bond Shear (>15.00 grams)	JESD22-A110		231		77 units / lot
			231 (0)	0/231	Pass	
			45 (0)	0/45	Pass	
				231		
			231 (0)	0/231	Pass	
			45 (0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: ETS300		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 500 hrs System: SHEL LAB	JESD22-A103		135		45 units / lot
	Electrical Test: +25°C, 85°C and 125°C System: ETS300		135(0)	0/135	Pass	
	Stress Condition: Bake 175°C, 1000 hrs System: SHEL LAB			135		
	Electrical Test: +25°C, 85°C and 125°C System: ETS300		135(0)	0/135	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERS A 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	CDF-AEC- Q100-001	30 (0) bonds	0/30	Pass	