



QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN#: MFOL-15LRFR707

Date:
April 24, 2026

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for CAP1206-1-SL, CAP1206-1-SL-TR, CAP1208-1-SL-TR, CAP1296-1-SL-TR, CAP1298-1-SL-TR, CAP1208-1-SL, CAP1296-1-SL, and CAP1298-1-SL catalog part numbers (CPN) available in 14L SOIC (.150in) package at MTAI assembly site.



MICROCHIP Package Qualification Report

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for CAP1206-1-SL, CAP1206-1-SL-TR, CAP1208-1-SL-TR, CAP1296-1-SL-TR, CAP1298-1-SL-TR, CAP1208-1-SL, CAP1296-1-SL, and CAP1298-1-SL catalog part numbers (CPN) available in 14L SOIC (.150in) package at MTAI assembly site.

CCB No.: 7549

<u>Misc.</u>	Assembly site	MTAI
	BD Number	BD-003154/01
	MP Code (MPC)	TG105YD3XE1C
	Part Number (CPN)	CAP1298-1-SL-TR
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	2600
<u>Lead-Frame</u>	Paddle size	95 x 155
	Material	CDA194
	DAP Surface Prep	Bare Cu
	Treatment	Roughening (BOT)
	Process	Stamped
	Lead-lock	No
	Part Number	10101411
<u>Bond Wire</u>	Lead Plating	Matte tin
	Material	CuPdAu
<u>Die Attach</u>	Part Number	8390A
	Conductive	Yes
<u>MC</u>	Part Number	G600V
<u>PKG</u>	PKG Type	SOIC
	Pin/Ball Count	14
	PKG width/size	150 mils



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Package Qualification Report

Manufacturing Information

Assembly Lot No.	Package
MTAI263700612.000	14L SOIC
MTAI263700698.000	14L SOIC
MTAI263700700.000	14L SOIC

Conclusion:

Qualification of TG105 mask / CAP1298-1-SL-TR product / 0.8 mil CuPdAu wire in 14L SOIC 150 mils (D3X) package at MTAI 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	MTAI263700612.000	MTAI263700698.000	MTAI263700700.000
Electrical Results (Fail / Pass)	0/231	0/231	0/231
Electrical Test Tester: FUSION_MX / EX_HCOVI	25°C		
Result	Passed		



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Package Qualification Report

High Temp Storage

Test Method	JESD22-A103		
Test Condition	175°C / 504 hours		
Required Sample Size	45 units each lot / 3 lots;		
Lot ID	MTAI263700612.000	MTAI263700698.000	MTAI263700700.000
Electrical Results (Fail / Pass)	0/45	0/45	0/45
Electrical Test Tester: FUSION_MX / EX_HCOVI	25°C		
Result	Passed		

Temperature Cycling

Test Method	JESD22-A104		
Test Condition	-65°C / +150°C Air to Air / 500 Cycles		
Required Sample Size	77 units each lot / 3 lots		
Lot ID	MTAI263700612.000	MTAI263700698.000	MTAI263700700.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
WBP (Fail / Pass)	0/5	N/A	N/A
Electrical Test Tester: FUSION_MX / EX_HCOVI	25°C		
Result	Passed		



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Package Qualification Report

Biased HAST

Test Method	JESD22-A110		
Test Condition	+130°C / 85%RH / 96 hours / Bias Voltage: 5.5V		
Required Sample Size	77 units each lot / 3 lots		
Lot ID	MTAI263700612.000	MTAI263700698.000	MTAI263700700.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
Electrical Test Tester: FUSION_MX / EX_HCOVI	25°C		
Result	Passed		

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	MTAI263700612.000	MTAI263700698.000	MTAI263700700.000
Electrical Results (Fail / Pass)	0/77	0/77	0/77
Electrical Test Tester: FUSION_MX / EX_HCOVI	25°C		
Result	Passed		



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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
Result	Passed

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
Result	Passed