



QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: CAAN-18ALRB779

Date:
February 10, 2026

Qualification of CuPdAu as a new wire material for MCP1401T-E/OT, MCP1402T-E/OT, MCP1416RT-E/OT, MCP1415RT-E/OT, MCP1416T-E/OT and MCP1415T-E/OT catalog part numbers (CPN) available in 5L SOT-23 package.



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of CuPdAu as a new wire material for MCP1401T-E/OT, MCP1402T-E/OT, MCP1416RT-E/OT, MCP1415RT-E/OT, MCP1416T-E/OT and MCP1415T-E/OT catalog part numbers (CPN) available in 5L SOT-23 package.
CN	E000291939
QUAL ID	R2501493
Bonding No.	BD-003936 Rev.01
MP CODE	40AL2YC7XB00
Part No.	MCP1416RT-E/OT
CCB No.	7868
<u>Lead Frame</u>	
Paddle size	66 x 48
Material	CDA194
Surface	Ag plated
Process	Stamped
Lead lock	No
Part number	10100502
Plating composition	Matte Tin
<u>Bond Wire</u>	
Wire	CuPdAu wire
<u>Die Attach Material</u>	
Epoxy	84-3J/8006NS
<u>Mold Compound</u>	
Mold compound	G600V
<u>Package</u>	
Type	5L SOT-23



MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI263400608.000	MCSO525457144.500	2547EJ4
MTAI263400329.000	MCSO525457144.500	2547DDG
MTAI263400578.000	MCSO525457144.500	2547EGB

Result

☒ Pass ☐ Fail ☐ _____

5L SOT-23 assembled by MTAI 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 Reliability Tests (At MSL Level 1)	Electrical Test: +25°C and 125°C System: ETS88	JESD22- A113	693(0)	0/693	Pass	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: ETS88		693(0)	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: ETS88 Bond Strength: Wire Pull (>3.00 grams)	JESD22-A104	231(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: HAST 6000X Electrical Test: +25°C System: ETS88	JESD22-A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 18 Volts System: HAST 6000X Electrical Test: +25°C and 125°C System: ETS88	JESD22-A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot

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: TPS Bake Oven	JESD22- A103		135		45 units / lots
	Electrical Test: +25°C and 125°C System: ETS88		135(0)	0/135	Pass	
Bond Strength Data Assembly	Wire Pull (>3.00 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	