MICROCHIP

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: ALAN-20AYEA392

Date:
August 13, 2025

Qualification of UNIG as a new assembly site for selected UCS21xx, MIC23xx, MIC24xx, SPN01xx, MIC28xx, MIC33xx, MIC53xx, MIC50xx, MIC94xx, MIC74xx, SPN02xx, MIC44xx, MIC95xx, MIC30xx, and SPN95xx device families available in multiple packages.

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of UNIG as a new assembly site for selected UCS21xx, MIC23xx, MIC24xx, SPN01xx, MIC28xx, MIC33xx, MIC53xx, MIC50xx, MIC94xx, MIC74xx, SPN02xx, MIC44xx, MIC95xx, MIC30xx, and SPN95xx device families available in multiple packages.
CN	E000254054
QUAL ID	R2500855 (UMQ-0425-0046) Rev. A
Bonding No.	D-013440
MP CODE	3600NYNNAA09
Part No.	MIC7401-0001YFL-TR
CCB No.	6621

Lead Frame

Paddle size	67 x 67 mils
Material	A194FH
Surface	Ag selective
Process	Etch
Lead lock	Yes
Part number	40500064
Plating composition	Matte Sn

Bond Wire

Wire	Au wire

Die Attach Material

Epoxy	SAC035

Mold compound

Mold compound	G770HCD

Package

Type	36L VQFN
Package size	4.5 x 4.5 x 0.9 mm

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
UNIG253600001.000	DU01924407169.200	2449SDG
UNIG253600002.000	DU01924407169.200	2449SDS
UNIG253700001.000	DU01924407169.200	2450SDY

Result [X] Pass [ ] Fail [ ] ____________________

36L VQFN (4.5x4.5x0.9mm) assembled by UNIG pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 2 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 2)	**Electrical Test:** +25°C System: TMT	JEDEC J-STD-020 / JESD47	693(0)	0/693	Pass	Good Devices
	Bake 125°C, 24 hrs.			693		
	85°C/60%RH Moisture Soak 168 hrs.			693		
	3x Convection-Reflow 265°C max			693		
	Electrical Test: +25°C System: TMT		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	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: TMT		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>3.00 grams)		15(0) (Wires)	0/15 (Wires)	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs.	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: TMT		231(0)	0/231	Pass	77 units / lot
	Stress Condition: +130°C/85%RH, 192 hrs.			231		
	Electrical Test: +25°C System: TMT		231(0)	0/231	Pass	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 150°C, 1008 hrs.	JESD22-A103		135		45 units / lot
	Electrical Test: +25°C System: TMT		135(0)	0/135	Pass	
Solderability Temp 245°C	**Steam Aging:** Temp 93°C, 8Hrs	J-STD-002		22		
	Solder Dipping: Solder Temp. 245°C **Solder material:** Pb Free Sn95.5 Ag3.9 Cu0.6			22		
	Visual Inspection: External Visual Inspection		22(0)	0/22	Pass	
Physical Dimensions	Physical Dimension 10 units / 1 lot	JESD22-B100/B108	30(0)	0/30	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	