MICROCHIP

QUALIFICATION PLAN SUMMARY

PCN #: DSNO-18SQTN760

Date:
May 8, 2025

Qualification of ATP7 as an additional assembly site for selected MIC2875 and MIC2876 device families available in 8L UDFN (2x2x0.6mm) package.

Purpose: **Qualification of ATP7 as an additional assembly site for selected MIC2875 and MIC2876 device families available in 8L UDFN (2x2x0.6mm) package.**

CCB No.: **7580**

Misc.	Assembly site	ATP7
	BD Number	TBD
	MP Code (MPC)	TKNB1xxx
	Part Number (CPN)	Various
	MSL information	MSL-1, 260'C
	Assembly Shipping Media (T/R, Tube/Tray)	Cannister
	Base Quantity Multiple (BQM)	3,300
	Reliability Site	MTAI
Lead-Frame	Paddle size	67x39mils
	Material	C7025
	DAP Surface Prep	Ring Ag
	Treatment	Rough
	Process	Etch
	Lead-lock	Yes (Half Etch)
	Part Number	101431341
	Lead Plating	MatteSn
	Strip Size	70x250mm
	Strip Density	2496
Bond Wire	Material	CuPdAu
Die Attach	Part Number	AP4300
	Conductive	Yes
MC	Part Number	G631BQF
PKG	Package Type	UDFN
	Pin/Ball Count	8
	PKG width/size	2x2x0.6mm

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	UNIC	MTAI	UDFN	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Backward Solderability	J-STD-002D ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	UNIC	MTAI	UDFN	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	ATP7	ATP7	UDFN	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	ATP7	ATP7	UDFN	30 bonds from a min. 5 devices.
Wire Sweep								ATP7	ATP7	UDFN	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	ATP7	ATP7	UDFN	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	ATP7	ATP7	UDFN	
HTSL (High Temp Storage Life)	JESD22-A103. +175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25°C.	45	5	1	50	0	10	UNIC	MTAI	UDFN	
Preconditioning - Required for surface mount devices	JESD22-A113. +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C. MSL1, 260°C	231	15	3	738	0	15	UNIC	MTAI	UDFN	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110. +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	UNIC	MTAI	UDFN	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118. +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	UNIC	MTAI	UDFN	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at +25°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	UNIC	MTAI	UDFN	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.