MICROCHIP

QUALIFICATION PLAN SUMMARY

PCN #: ASER-28LQKG396

Date:
June 27, 2019

Qualification of MMT as an additional assembly site for selected SMSC products of 0.18µm Global Foundries wafer technology available in 128L TQFP (14x14x1 mm) package.

Purpose: Qualification of MMT as an additional assembly site for selected SMSC products of 0.18µm Global Foundries wafer technology available in 128L TQFP (14x14x1 mm) package.

Misc.	Assembly site	MMT
	BD Number	BDM-002151/A
	MP Code (MPC)	TG2151Z2XBBC
	Part Number (CPN)	SCH5555-NU
	MSL information	MSL-1
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	90units/tray
	Reliability Site	MTAI
	CCB#	3870
Lead-Frame	Paddle size	190x190 mils
	Material	C7025
	DAP Surface Prep	Double Ag Ring Plated
	Treatment	BOT
	Process	Etched
	Lead-lock	No
	Lead Plating	Matte Tin
	Strip Size	70x250mm
	Strip Density	30 units/strip
Bond Wire	Material	CuPdAu
Die Attach	Part Number	3280
	Conductive	Yes
MC	Part Number	G700HA
PKG	PKG Type	TQFP
	Pin/Ball Count	128
	PKG width/size	14x14x1mm
Die	Die Thickness	7 mils
	Die Size	118.5x118.5 mils
	Fab Process (site)	0.18um/GF

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	Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002 ; 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	MTAI	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-002 ;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	MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15	0	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MMT	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/ MTAI	
Preconditioning - Required for surface mount devices	+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/MSL3 @ 260°C	231	15	3	738	0	15	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.