QUALIFICATION PLAN SUMMARY

PCN#: MAAN-16HABX699

Date:
February 10, 2025

Qualification of Microchip Technology Gresham – Fab 4 (GRTM) as a new fabrication location for selected MCP125x, MCP1602, MCP162x, MCP163x, MCP164x, MCP1726, MCP62x, MCP63x, MCP65x, MCP66x, MCP970x, TC101x, TC1047, TC105x, TC107x, TC110x, TC117x, TC118x, TC122x, TC126x, TC1272A, TC130xx, TC1313, TC2117, TC74, TCM80x, MCP1612, MCP6Vx and TCM810 device families available in various packages.

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CCB No.: 7413.001 and 7364.013

Misc.	Assembly site	**MTAI**
	BD Number	A-051160
	MP Code (MPC)	GBAT1QC6XVA1
	Part Number (CPN)	MCP9700T-H/TTVAO
	MSL information	MSL-1
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTAI
Lead-Frame	Paddle size	64 x 38 mils
	Material	CDA194
	DAP Surface Prep	Ag Spot
	Treatment	No
	Process	Stamp
	Lead-lock	No
	Part Number	10100301
	Lead Plating	Matte Tin
	Strip Size	228.288x50.8mm
	Strip Density	256 pads / strip
Bond Wire	Material	Au
Die Attach	Part Number	8390A
	Conductive	Yes
MC	Part Number	G600V
PKG	Package Type	SOT-23
	Pin/Ball Count	3L

Test Name	Conditions	Reliability Stress Read Point Grade 0: -40°C to +150°C (MCHP H Temp)	Pre & Post Reliability Stress Test Temperature Grade 0: -40°C to +150°C (MCHP H Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5	0	5	30 bonds from a min. 5 devices.
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	JESD22-A103 +125°C, +150°C or +175°C	Grade 0: 1000 hrs (+175°C) or 2000 hrs (150°C)	Grade 0: +25°C, +85°C, +125°C, +150°C	45	5	1	50	0	21 - 83	Spares should be properly identified.
Preconditioning - Required for surface mount devices	J-STD-020 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. MSL1		Grade 0: +25°C	231 + 45 (for devices requiring PTC)	15 + 5 (for devices requiring PTC)	3	738 + 50 (for devices requiring PTC)	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test. 45 parts from one lot to be used for PTC test (for devices requiring PTC).
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs or +110°C/85%RH for 264 hrs	Grade 0: 96 hrs (+130°C/85% RH) or 264 hrs (+110°C/85%RH)	Grade 0: +25°C, +85°C, +125°C, +150°C	77	5	3	246	0	10 - 14	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs	Grade 0: 96 hrs (+130°C/85% RH) or 264 hrs (+110°C/85% RH)	Grade 0: +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 and Appendix 3 -55ºC to +125ºC, -55ºC to +150ºC	Grade 0: 1500 cycles (-55ºC to +150ºC)	Grade 0: +25°C, +85°C, +125°C, +150°C	77	5	3	246	0	15 - 60	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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Test	Number of Lot/s	Sample Size (per lot)	Total Samples	Conditions
ELFR	3	800	2400	48 hours @ 150°C
DLT	3	77	231	1000 Hours @ 150°C
ESD (HBM)	3	12	36	3 each @ ±250V, ±500V, ±1KV & ±2KV
ESD (CDM)	3	9	27	3 each @ ±250V, ±500V, ±750V
Latch Up	3	6	18	3 each @125°C AECQ100-004
Electrical Distribution	3	33	99	Data log parameters at room, hot, and cold temperatures at Vcc min/max and Frequency min/max.