



DEFENSE LOGISTICS AGENCY
LAND AND MARITIME
POST OFFICE BOX 3990
COLUMBUS, OH 43218-3990

July 29, 2020

Ms. Valerie Lepaludier
Product Quality Engineer Manager
Microchip Technology Nantes
La Chantrerie BP70602
44306 Nantes Cedex 3, France

Dear Ms Lepaludier:

Re: Full Certification Class Q and V for MIL-PRF-38535; FSC 5962;
VQC-20-0035188; Thacker.

Microchip Technology Nantes (formerly Atmel-Nantes) has demonstrated to the DLA Land and Maritime that it complies with MIL-PRF-38535, the performance specification used by the Department of Defense for monolithic integrated circuits that operate in severe environments.

This letter supersedes previous Level Q and V Certification/Qualification letters granted to Microchip Technology Nantes, effective immediately, to reflect the current certification status of your facilities as documented on the Quality Management Program (QMP).

In addition, the parts that are manufactured using the certified technology flows are being listed on the QML-38535. This will allow Microchip Technology Nantes to mark parts with "Q" or "QML". These designators have been authorized by the Department of Defense for parts that have been produced to a QML specification, (i.e., one which allows less government oversight), the use of world-wide commercial production lines, reduced finished product testing based on statistical process controls (SPC), and other cost advantages.

Testing must be performed using the facilities and methods listed in the Laboratory Suitability letter DLA Land and Maritime-VQC-20-035189, or at facilities approved by the Microchip Technology Nantes Technical Review Board using its MIL-PRF-38535 Quality Management Program Plan, AEQA 0223 Revision P.

This certification is subject to the conditions in DoD 4120.24-M, Defense Standardization Program and SD-6.

Any and all of the facilities mentioned on the enclosure are subject to an audit by the Qualifying Activity at any time. Offshore facilities are subject to all of the conditions of MIL-PRF-38535.

QPL/QML manufacturers shall notify the qualifying activity immediately after learning of a potential issuance of a GIDEP alert, problem advisory or major quality/reliability problem on their QPL/QML products. Failure to provide prior notification may be grounds for removal from QML-38535.

Finally, it is requested that the following activities be reported promptly to DLA Land and Maritime:

1. Changes to certified facilities, process flows, or approved testing subcontractors
2. Problem evaluation and a corrective action when:
 - a. A Technology Conformance Inspection (TCI) failure has been validated
 - b. The reliability of shipped parts is questionable.
3. Test optimization, including:
 - a. Implementation - paragraph J.3.12, Appendix J, MIL-PRF-38535
 - b. Changing, suspending or canceling a prior test optimization
4. Additions or deletions of parts in the QML-38535
5. Change of company QML contact or other key QML personnel

This certification is valid until terminated by written notice from the qualifying activity. If warranted, it may be withdrawn by this Agency at any time.

If you have any questions, please contact Mr. Andrew Thacker at 614-692-0589.

Sincerely,

MICHAEL ADAMS
Chief
Custom Devices Branch

Enclosure

MIL-PRF-38535 Q and V

Operation	Location	Line/Flow
Design	Atmel Design Center, Nantes, France	
	Atmel Design Center, Milan, Italy	
	Atmel Design Center, Garching, Germany	
	Atmel Design Center, Winnersh, UK	
Mask Development	Toppan Chungwa Electronics, Taoyuan, Taiwan	
Wafer Fab	MHS Nantes , France /*	0.8 micron STD & RT 0.6 micron STD & RT 0.5 micron STD & RT
	L Foundry , Rousset , France /*	0.35 micron STD & RT 0.25 micron STD&RT 0.18 micron STD&RT
	UMC Fab 8S, Hsinchu, Taiwan	0.18 micron STD&RT
	UMC Fab 8C, Hsinchu, Taiwan	0.15 micron STD&RT
	UMC Fab 12A, Tainan, Taiwan	0.09 micron STD&RT
Backgrinding	Optim, Gréasque, France /* MMT, Thailand	
Wafer Probe	Microchip Technology Nantes, France	
Assembly	E2V, Grenoble, France /** letter code : F location code : E2V2	PGA Flatpack, LCC, MDIL Cerquad MCGA & LGA
	MMT, Thailand letter code : W location code : MMT5	CQFP, LGA
Screening/QCI	See DLA Land and Maritime-VQC-20-035189 Laboratory Suitability letter	
Final Test	Microchip Technology Nantes, France	

/* Wafer stock only

/** Parts from stock only

Package, Die Attach, Wire Bond, Seal & Lead Finish Matrix

T-E2V assembly line		Die Attach		Wire Bond	Package Seal			
Package Type	Lead Range	Silver Cyanate Ester JM7000	Silver Glass QMI 2569	Al 1.25 mil	Solder Seal	Glass Seal ^{1/}	Seam Seal	Lead Finish ^{2/}
MQFP	28 - 352	X		X	X			Gold
MLCC	24 only	X		X	X			Gold
Side Braze DIP	14 - 48	X		X	X			Gold
PGA	69 - 232	X		X	X			Gold
CQFP	80 - 196		X	X		X		Solder
MCGA	349 - 472	X		X			X	Solder
LGA	349 - 625	X		X			X	Gold

1/ KC700 high temp glass/KC320 low temp glass

2/ Class V products are gold lead finish only except for CGA packages.

MMT assembly line		Die Attach	Wire Bond	Package seal		Lead Finish
Package Type	Lead Range	Silver Cyanate Ester JM7000	Al 1 & 1.25 mils	Solder seal	Seam Weld	
CQFP (1)	28 - 352	X	X	X	X	Gold
LGA (1)	349 - 896	X	X	X	X	Gold

1/: Multi-decks or flat-substrate packages