

# Product Change Notification - LIAL-21VFOW015

**Date:** 16 Jan 2018

**Product Category:** 8-bit PIC Microcontrollers; Capacitive Touch Sensors; 16-Bit - Microcontrollers and Digital Signal Controllers; Interface- Serial Peripherals; Digital Potentiometers

**Notification subject:** CCB 3219,3219.001-3219.005 Initial Notice: Qualification of MMT as an additional site for selected products of 150K and 160K wafer technologies available in 28L QFN-S,16L,20L,28L and 44L QFN packages

**Notification text:**

**PCN Status:**  
Initial notification.

**PCN Type:**  
Manufacturing Change

**Microchip Parts Affected:**  
Please open the attachments found in the attachments field below labeled as PCN\_#\_Affected\_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

**Description of Change:**  
Qualification of MMT as an additional assembly site for selected products of 150K and 160K wafer technologies available in 28L QFN-S, 16L, 20L, 28L and 44L QFN packages.

**Pre Change:**  
Assembled at MTAI assembly site

**Post Change:**  
Assembled at MTAI and MMT assembly site.

**Pre and Post Change Summary:**

	Pre Change	Post Change	
<b>Assembly Site</b>	Microchip Technology Thailand HQ (MTAI).	Microchip Technology Thailand HQ (MTAI).	Microchip Technology Thailand Branch (MMT)
<b>Wire material</b>	CuPdAu	CuPdAu	
<b>Die attach material</b>	3280	3280	
<b>Molding compound material</b>	G700LTD	G700LTD	
<b>Lead frame material</b>	C194	C194	

**Impacts to Data Sheet:**  
None

**Change Impact:**  
None

**Reason for Change:**  
To improve on-time delivery performance by qualifying MMT as an additional assembly site.

**Change Implementation Status:**  
In Progress

**Estimated Qualification Completion Date:**  
April 2018

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

**Time Table Summary:**

	January 2018				→	April 2018			
Workweek	01	02	03	04		14	15	16	17
Initial PCN Issue Date			X						
Qual Report Availability							X		
Final PCN Issue Date							X		

**Method to Identify Change:**  
Traceability code.

**Qualification Plan:**  
Please open the attachments included with this PCN labeled as PCN\_#\_Qual Plan.

**Revision History:**  
**January 16, 2018:** Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

**Attachment(s):**

[PCN\\_LIAL-21VFOW015\\_AFFECTED\\_CPN.pdf](#)  
[PCN\\_LIAL-21VFOW015\\_QUAL\\_PLAN.pdf](#)  
[PCN\\_LIAL-21VFOW015\\_AFFECTED\\_CPN.xlsx](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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To opt out of future offer or information emails (other than product change notification emails), click here to go to [microchipDIRECT](#) and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
AR1010-I/ML
AR1010T-I/ML
AR1011-I/ML
AR1011T-I/ML
AR1020-I/ML
AR1020T-I/ML
AR1021-I/ML
AR1021T-I/ML
DSPIC30F1010-20E/MM
DSPIC30F1010-30I/MM
DSPIC30F2010-20E/MM
DSPIC30F2010-20I/MM
DSPIC30F2010-30I/MM
DSPIC30F2010T-20E/MM
DSPIC30F2010T-20I/MM
DSPIC30F2010T-30I/MM
DSPIC30F2010T-30V/MMA31
DSPIC30F2011-20I/ML
DSPIC30F2011-30I/ML
DSPIC30F2012-20E/ML
DSPIC30F2012-20I/ML
DSPIC30F2012-30I/ML
DSPIC30F2020-20E/MM
DSPIC30F2020-30I/MM
DSPIC30F2020T-30I/MM
DSPIC30F2023-20E/ML
DSPIC30F2023-30I/ML
DSPIC30F2023T-30I/ML
DSPIC30F2023T-30V/MLD31
DSPIC30F3010-20I/ML
DSPIC30F3010-30I/ML
DSPIC30F3010T-30I/ML
DSPIC30F3011-10I/MLB24
DSPIC30F3011-20E/ML
DSPIC30F3011-20I/ML
DSPIC30F3011-30I/ML
DSPIC30F3011T-10I/MLB21
DSPIC30F3012-20E/ML
DSPIC30F3012-20I/ML
DSPIC30F3012-30I/ML
DSPIC30F3012T-20I/ML
DSPIC30F3013-20E/ML
DSPIC30F3013-20I/ML
DSPIC30F3013-30I/ML
DSPIC30F3013-30I/MLB31
DSPIC30F3013T-20I/ML
DSPIC30F3013T-30I/ML
DSPIC30F3013T-30I/MLB31
DSPIC30F3014-20E/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
DSPIC30F3014-20I/ML
DSPIC30F3014-30I/ML
DSPIC30F3014-30I/MLA31
DSPIC30F3014T-30I/MLA31
DSPIC30F4011-20E/ML
DSPIC30F4011-20I/ML
DSPIC30F4011-30I/ML
DSPIC30F4012-20E/ML
DSPIC30F4012-20I/ML
DSPIC30F4012-30I/ML
DSPIC30F4013-20E/ML
DSPIC30F4013-20I/ML
DSPIC30F4013-30I/ML
DSPIC30F4013-30I/MLB31
DSPIC30F4013T-30I/ML
DSPIC30F4013T-30I/MLB31
MCP23016-I/ML
MCP23016T-I/ML
MCP23017-E/ML
MCP23017T-E/ML
MCP23S17-E/ML
MCP23S17T-E/ML
MCP4231-103E/ML
MCP4231-104E/ML
MCP4231-502E/ML
MCP4231-503E/ML
MCP4231T-103E/ML
MCP4231T-104E/ML
MCP4231T-502E/ML
MCP4231T-503E/ML
MCP4241-103E/ML
MCP4241-104E/ML
MCP4241-502E/ML
MCP4241-503E/ML
MCP4241T-103E/ML
MCP4241T-104E/ML
MCP4241T-502E/ML
MCP4241T-503E/ML
MCP4251-103E/ML
MCP4251-104E/ML
MCP4251-502E/ML
MCP4251-503E/ML
MCP4251T-103E/ML
MCP4251T-104E/ML
MCP4251T-502E/ML
MCP4251T-503E/ML
MCP4261-103E/ML
MCP4261-104E/ML
MCP4261-502E/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
MCP4261-503E/ML
MCP4261T-103E/ML
MCP4261T-104E/ML
MCP4261T-502E/ML
MCP4261T-503E/ML
MCP4331-103E/ML
MCP4331-104E/ML
MCP4331-502E/ML
MCP4331-503E/ML
MCP4331T-103E/ML
MCP4331T-104E/ML
MCP4331T-502E/ML
MCP4331T-503E/ML
MCP4341-103E/ML
MCP4341-104E/ML
MCP4341-502E/ML
MCP4341-503E/ML
MCP4341T-103E/ML
MCP4341T-104E/ML
MCP4341T-502E/ML
MCP4341T-503E/ML
MCP4351-103E/ML
MCP4351-104E/ML
MCP4351-502E/ML
MCP4351-503E/ML
MCP4351T-103E/ML
MCP4351T-104E/ML
MCP4351T-502E/ML
MCP4351T-503E/ML
MCP4361-103E/ML
MCP4361-104E/ML
MCP4361-502E/ML
MCP4361-503E/ML
MCP4361T-103E/ML
MCP4361T-104E/ML
MCP4361T-502E/ML
MCP4361T-503E/ML
MCP4431-103E/ML
MCP4431-104E/ML
MCP4431-502E/ML
MCP4431-503E/ML
MCP4431T-103E/ML
MCP4431T-104E/ML
MCP4431T-502E/ML
MCP4431T-503E/ML
MCP4441-103E/ML
MCP4441-104E/ML
MCP4441-502E/ML
MCP4441-503E/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
MCP4441T-103E/ML
MCP4441T-104E/ML
MCP4441T-502E/ML
MCP4441T-503E/ML
MCP4451-103E/ML
MCP4451-104E/ML
MCP4451-502E/ML
MCP4451-503E/ML
MCP4451T-103E/ML
MCP4451T-104E/ML
MCP4451T-502E/ML
MCP4451T-503E/ML
MCP4461-103E/ML
MCP4461-104E/ML
MCP4461-502E/ML
MCP4461-503E/ML
MCP4461T-103E/ML
MCP4461T-104E/ML
MCP4461T-502E/ML
MCP4461T-503E/ML
MCP4631T-103E/ML
MCP4631T-104E/ML
MCP4631T-502E/ML
MCP4631T-503E/ML
MCP4641T-103E/ML
MCP4641T-104E/ML
MCP4641T-502E/ML
MCP4641T-503E/ML
MCP4651T-103E/ML
MCP4651T-104E/ML
MCP4651T-502E/ML
MCP4651T-503E/ML
MCP4661T-103E/ML
MCP4661T-104E/ML
MCP4661T-104QE/ML
MCP4661T-502E/ML
MCP4661T-503E/ML
MCP4661T-503QE/ML
PIC16F505-E/MG
PIC16F505-I/MG
PIC16F505T-E/MG
PIC16F505T-I/MG
PIC16F506-E/MG
PIC16F506-I/MG
PIC16F506T-E/MG
PIC16F506T-I/MG
PIC16F526-E/MG
PIC16F526-I/MG
PIC16F526T-I/MG

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC16F527-E/ML
PIC16F527-I/ML
PIC16F527T-I/ML
PIC16F570-E/ML
PIC16F570-I/ML
PIC16F570T-I/ML
PIC16F610-E/ML
PIC16F610-I/ML
PIC16F610T-E/ML
PIC16F610T-I/ML
PIC16F616-E/ML
PIC16F616-H/ML
PIC16F616-I/ML
PIC16F616T-E/ML
PIC16F616T-E/MLC07
PIC16F616T-I/ML
PIC16F616T-I/ML034
PIC16F616T-I/ML042
PIC16F616T-I/ML066
PIC16F627A-E/ML
PIC16F627A-I/ML
PIC16F627AT-I/ML
PIC16F628A-E/ML
PIC16F628A-I/ML
PIC16F628AT-E/ML
PIC16F628AT-I/ML
PIC16F630-E/ML
PIC16F630-I/ML
PIC16F630T-I/ML
PIC16F630T-I/ML079
PIC16F631-E/ML
PIC16F631-I/ML
PIC16F631T-I/ML
PIC16F636-I/ML
PIC16F636T-I/ML
PIC16F636T-I/ML037
PIC16F648A-E/ML
PIC16F648A-I/ML
PIC16F648AT-E/ML
PIC16F648AT-I/ML
PIC16F676-E/ML
PIC16F676-I/ML
PIC16F676T-I/ML
PIC16F677-E/ML
PIC16F677-I/ML
PIC16F677T-I/ML
PIC16F677T-I/ML035
PIC16F677T-I/ML037
PIC16F684-E/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC16F684-I/ML
PIC16F684T-I/ML
PIC16F684T-I/ML065
PIC16F684T-I/ML070
PIC16F685-E/ML
PIC16F685-I/ML
PIC16F685T-E/ML
PIC16F685T-I/ML
PIC16F687-E/ML
PIC16F687-E/ML034
PIC16F687-I/ML
PIC16F687T-E/ML
PIC16F687T-I/ML
PIC16F688-E/ML
PIC16F688-I/ML
PIC16F688T-I/ML
PIC16F688T-I/MLAPL
PIC16F689-E/ML
PIC16F689-I/ML
PIC16F689T-E/ML
PIC16F689T-I/ML
PIC16F690-E/ML
PIC16F690-I/ML
PIC16F690T-E/ML
PIC16F690T-I/ML
PIC16F690T-I/ML050
PIC16F690T-I/MLC12
PIC16F72-E/ML
PIC16F72-I/ML
PIC16F72T-I/ML
PIC16F737-E/ML
PIC16F737-I/ML
PIC16F737T-I/ML
PIC16F73-E/ML
PIC16F73-I/ML
PIC16F73T-I/ML
PIC16F747-I/ML
PIC16F747T-I/ML
PIC16F753-E/ML
PIC16F753-I/ML
PIC16F753T-I/ML
PIC16F767-E/ML
PIC16F767-I/ML
PIC16F767T-E/ML
PIC16F767T-I/ML
PIC16F76-I/ML
PIC16F76T-I/ML
PIC16F777-I/ML
PIC16F77-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC16F785-E/ML
PIC16F785-I/ML
PIC16F785-I/MLC15
PIC16F785T-E/ML
PIC16F785T-I/ML
PIC16F785T-I/ML036
PIC16F785T-I/ML045
PIC16F785T-I/ML047
PIC16F785T-I/MLC15
PIC16F818-E/ML
PIC16F818-I/ML
PIC16F818T-I/ML
PIC16F819-E/ML
PIC16F819-I/ML
PIC16F819-I/MLTSL
PIC16F819T-E/ML
PIC16F819T-I/ML
PIC16F873A-E/ML
PIC16F873A-I/ML
PIC16F873AT-I/ML
PIC16F874A-I/ML
PIC16F874AT-I/ML
PIC16F876A-E/ML
PIC16F876A-I/ML
PIC16F876AT-E/ML
PIC16F876AT-I/ML
PIC16F877A-E/ML
PIC16F877A-I/ML
PIC16F877AT-I/ML
PIC16F87-I/ML
PIC16F882-E/ML
PIC16F882-I/ML
PIC16F882T-I/ML
PIC16F883-E/ML
PIC16F883-I/ML
PIC16F883T-E/ML
PIC16F883T-I/ML
PIC16F883T-I/ML031
PIC16F884-E/ML
PIC16F884-I/ML
PIC16F884T-I/ML
PIC16F886-E/ML
PIC16F886-I/ML
PIC16F886T-E/ML
PIC16F886T-I/ML
PIC16F886T-I/MLC06
PIC16F887-E/ML
PIC16F887-I/ML
PIC16F887T-I/ML



Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC16F88-E/ML
PIC16F88-I/ML
PIC16F88T-I/ML
PIC16F913-E/ML
PIC16F913-I/ML
PIC16F913T-I/ML
PIC16F914-E/ML
PIC16F914-I/ML
PIC16F914T-I/ML
PIC16F916-E/ML
PIC16F916-I/ML
PIC16F916T-I/ML
PIC16F916T-I/MLC02
PIC16F917-E/ML
PIC16F917-I/ML
PIC16F917T-I/ML
PIC16HV610-E/ML
PIC16HV610-I/ML
PIC16HV610T-I/ML
PIC16HV616-E/ML
PIC16HV616-I/ML
PIC16HV616T-E/ML
PIC16HV616T-I/ML
PIC16HV753-E/ML
PIC16HV753-I/ML
PIC16HV753T-I/ML
PIC16HV785-E/ML
PIC16HV785-I/ML
PIC16HV785T-E/ML
PIC16HV785T-I/ML
PIC16LF627A-I/ML
PIC16LF627AT-I/ML
PIC16LF628A-I/ML
PIC16LF628AT-I/ML
PIC16LF648A-I/ML
PIC16LF648AT-I/ML
PIC16LF72-I/ML
PIC16LF72-I/ML026
PIC16LF72T-I/ML
PIC16LF737-I/ML
PIC16LF73-I/ML
PIC16LF73T-I/ML
PIC16LF767-I/ML
PIC16LF767T-I/ML
PIC16LF76-I/ML
PIC16LF76T-I/ML057
PIC16LF777-I/ML
PIC16LF818-I/ML
PIC16LF818T-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC16LF819-I/ML
PIC16LF819T-I/ML
PIC16LF873A-I/ML
PIC16LF873AT-I/ML
PIC16LF874A-I/ML
PIC16LF876A-I/ML
PIC16LF876AT-I/ML
PIC16LF877A-I/ML
PIC16LF87-I/ML
PIC16LF88-I/ML
PIC16LF88T-I/ML
PIC18F1220-E/ML
PIC18F1220-H/ML
PIC18F1220-I/ML
PIC18F1220T-I/ML
PIC18F1230-E/ML
PIC18F1230-I/ML
PIC18F1230-I/MLXXX
PIC18F1320-E/ML
PIC18F1320-H/ML
PIC18F1320-I/ML
PIC18F1320T-I/ML
PIC18F1330-E/ML
PIC18F1330-I/ML
PIC18F1330-I/MLXXX
PIC18F1330-ICD/ML
PIC18F2221-E/ML
PIC18F2221-I/ML
PIC18F2221T-I/ML
PIC18F2321-E/ML
PIC18F2321-I/ML
PIC18F2331-E/MM
PIC18F2331-I/MM
PIC18F2331T-I/MM
PIC18F2410-E/ML
PIC18F2410-I/ML
PIC18F2420-E/ML
PIC18F2420-I/ML
PIC18F2420T-E/ML
PIC18F2420T-I/ML
PIC18F2423-E/ML
PIC18F2423-I/ML
PIC18F2423T-I/ML
PIC18F2431-E/MM
PIC18F2431-I/MM
PIC18F2431T-E/MM
PIC18F2431T-I/MM
PIC18F2450-I/ML
PIC18F2450T-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC18F2480-E/ML
PIC18F2480-I/ML
PIC18F2480-I/MLC01
PIC18F2480T-E/ML
PIC18F2480T-I/ML
PIC18F2510-E/ML
PIC18F2510-I/ML
PIC18F2510T-E/ML
PIC18F2510T-I/ML
PIC18F2520-E/ML
PIC18F2520-I/ML
PIC18F2520T-I/ML
PIC18F2523-E/ML
PIC18F2523-I/ML
PIC18F2523T-I/ML
PIC18F2580-E/ML
PIC18F2580-I/ML
PIC18F2580T-E/ML
PIC18F2580T-I/ML
PIC18F4220-E/ML
PIC18F4220-I/ML
PIC18F4220T-I/ML
PIC18F4221-E/ML
PIC18F4221-I/ML
PIC18F4320-E/ML
PIC18F4320-I/ML
PIC18F4320T-I/ML
PIC18F4321-E/ML
PIC18F4321-I/ML
PIC18F4331-I/ML
PIC18F4410-I/ML
PIC18F4420-E/ML
PIC18F4420-I/ML
PIC18F4420T-I/ML
PIC18F4423-E/ML
PIC18F4423-I/ML
PIC18F4423T-I/ML
PIC18F442-I/ML
PIC18F4431-I/ML
PIC18F4450-I/ML
PIC18F4455-I/ML
PIC18F4458-I/ML
PIC18F4480-E/ML
PIC18F4480-I/ML
PIC18F4480T-I/ML
PIC18F4510-E/ML
PIC18F4510-I/ML
PIC18F4510T-I/ML
PIC18F4515-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC18F4520-E/ML
PIC18F4520-I/ML
PIC18F4520T-E/ML
PIC18F4520T-I/ML
PIC18F4523-E/ML
PIC18F4523-I/ML
PIC18F4523T-I/ML
PIC18F4525-E/ML
PIC18F4525-I/ML
PIC18F4525T-I/ML
PIC18F452-E/ML
PIC18F452-I/ML
PIC18F452T-I/ML
PIC18F4550-I/ML
PIC18F4553-I/ML
PIC18F4580-E/ML
PIC18F4580-I/ML
PIC18F4580T-I/ML
PIC18F4585-E/ML
PIC18F4585-H/ML
PIC18F4585-I/ML
PIC18F4585-I/MLC01
PIC18F4585T-I/ML
PIC18F4610-I/ML
PIC18F4620-E/ML
PIC18F4620-I/ML
PIC18F4620T-I/ML
PIC18F4680-E/ML
PIC18F4680-H/ML
PIC18F4680-I/ML
PIC18F4680T-I/ML
PIC18F4682-E/ML
PIC18F4682-I/ML
PIC18F4685-E/ML
PIC18F4685-I/ML
PIC18F4685T-I/ML
PIC18LF1220-I/ML
PIC18LF1230-I/ML
PIC18LF1320-I/ML
PIC18LF1320T-I/ML
PIC18LF1330-I/ML
PIC18LF2221-I/ML
PIC18LF2321-I/ML
PIC18LF2321T-I/ML
PIC18LF2331-I/MM
PIC18LF2331T-I/MM
PIC18LF2410-I/ML
PIC18LF2410T-I/ML
PIC18LF2420-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC18LF2420T-I/ML
PIC18LF2420T-I/ML025
PIC18LF2423-I/ML
PIC18LF2423T-I/ML
PIC18LF2431-I/MM
PIC18LF2450-I/ML
PIC18LF2450T-I/ML206
PIC18LF2480-I/ML
PIC18LF2480T-I/ML
PIC18LF2510-I/ML
PIC18LF2510T-I/ML
PIC18LF2520-I/ML
PIC18LF2520T-I/ML
PIC18LF2523-I/ML
PIC18LF2523T-I/ML
PIC18LF2580-I/ML
PIC18LF4220-I/ML
PIC18LF4220T-I/ML
PIC18LF4221-I/ML
PIC18LF4221T-I/ML
PIC18LF4320-I/ML
PIC18LF4320T-I/ML
PIC18LF4320T-I/MLC06
PIC18LF4321-I/ML
PIC18LF4331-I/ML
PIC18LF4410-I/ML
PIC18LF4420-I/ML
PIC18LF4420T-I/ML
PIC18LF4423-I/ML
PIC18LF4423T-I/ML
PIC18LF442-I/ML
PIC18LF442T-I/ML
PIC18LF4431-I/ML
PIC18LF4450-I/ML
PIC18LF4450T-I/ML
PIC18LF4455-I/ML
PIC18LF4458-I/ML
PIC18LF4480-I/ML
PIC18LF4480T-I/ML
PIC18LF4510-I/ML
PIC18LF4510T-I/ML
PIC18LF4515-I/ML
PIC18LF4520-I/ML
PIC18LF4520T-I/ML
PIC18LF4523-I/ML
PIC18LF4523T-I/ML
PIC18LF4525-I/ML
PIC18LF4525T-I/ML
PIC18LF452-I/ML

Affected Catalog Part Numbers (CPN)

PCN_LIAL-21VFOW015
CATALOG_PART_NBR
PIC18LF452T-I/ML
PIC18LF4539-I/ML
PIC18LF4550-I/ML
PIC18LF4553-I/ML
PIC18LF4580-I/ML
PIC18LF4585-I/ML
PIC18LF4585T-I/ML
PIC18LF4610-I/ML
PIC18LF4620-I/ML
PIC18LF4620-I/ML035
PIC18LF4620T-I/ML
PIC18LF4620T-I/ML035
PIC18LF4680-I/ML
PIC18LF4682-I/ML
PIC18LF4685-I/ML
PIC18LF4685T-I/ML



**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN#: LIAL-21VFOW015**

**Date**

**December 14, 2017**

**Qualification of MMT as an additional assembly site for selected products of 150K and 160K wafer technologies available in 44L QFN package. The selected products available in 28L QFN-S, 16L, 20L and 28L QFN packages will qualify by similarity(QBS).**

**Purpose:** Qualification of MMT as an additional assembly site for selected products of 150K and 160K wafer technologies available in 44L QFN package. The selected products available in 28L QFN-S, 16L, 20L and 28L QFN packages will qualify by similarity(QBS).

**CCB No.:** 3219

		Qualification Report
<b>Misc.</b>	<b>Assembly site</b>	MMT
	<b>BD Number</b>	BDM-001587/A
	<b>MP Code (MPC)</b>	DECH1YT3XAXF
	<b>Part Number (CPN)</b>	PIC18F4520T-E/ML
<b>Lead-Frame</b>	<b>Paddle size</b>	272x272 mils
	<b>Material</b>	C194
	<b>Surface</b>	Bare Cu
	<b>Treatment</b>	BOT
	<b>Process</b>	Etched
	<b>Lead-lock</b>	No
	<b>Part Number</b>	10104411
	<b>Lead Plating</b>	Matte Tin
<b>Bond Wire</b>	<b>Material</b>	CuPdAu
<b>Die Attach</b>	<b>Part Number</b>	3280
	<b>Conductive</b>	Yes
<b>MC</b>	<b>Part Number</b>	G700LTD
<b>PKG</b>	<b>PKG Type</b>	QFN
	<b>Pin/Ball Count</b>	44
	<b>PKG width/size</b>	8x8x0.9mm
<b>Die</b>	<b>Die Thickness</b>	11 mils
	<b>Die Size</b>	145.7x146.9 mils
	<b>Fab Process (site)</b>	160K



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	MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	

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
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp. 85°C. 1 lot to be tested at 125C	45	5	1	50	0	25	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-020D for package type; Electrical test pre and post stress at +25°C. MSL1 @ 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. 1 lot to be tested at 125C	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. 1 lot to be tested at 125C	77	5	3	246	0	15	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.