



Product Change Notification - LIAL-02YNJF503

Date:

08 May 2018

Product Category:

8-bit PIC Microcontrollers; 16-Bit - Microcontrollers and Digital Signal Controllers; USB Power Delivery; Capacitive Touch Sensors; USB Bridge

Affected CPNs:**Notification subject:**

CCB 3220,3220.001-3220.008 Final Notice: Qualification of MMT as an additional assembly site for selected products of 200K wafer technology available in 64L, 44L, 28L, 20L, and 16L QFN packages

Notification text:**PCN Status:**

Final notification

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

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 200K wafer technology available in 64L QFN (9x9mm) ,44L QFN (8x8mm), 28L QFN (6x6mm and 5x5mm), 28L QFN-S (6x6mm and 5x5mm), 20L QFN (5x5mm and 4x4mm), and 16L QFN (4x4mm and 3x3mm) 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		
Assembly Site	Microchip Technology Thailand HQ (MTAI).		Microchip Technology Thailand HQ (MTAI)	Microchip Technology Thailand Branch (MMT)	
Wire material	Au	CuPdAu	Au	CuPdAu	CuPdAu
Die attach material	3280		3280		
Molding compound material	G700LTD		G700LTD		
Lead frame material	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 First Ship Date:

June 08, 2018 (date code: 1823)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	January 2018					-->	May 2018					June 2018				
Workweek	01	02	03	04	05		18	19	20	21	22	23	24	25	26	
Initial PCN Issue Date			X													
Qual Report Availability								X								
Final PCN Issue Date								X								
Estimated Implementation Date												X				

Method to Identify Change:

Traceability code

Qualification Report :

Please open the attachments included with this PCN labeled as PCN_#_Qual_Report

Revision History:

January 16, 2017: Issued initial notification.

May 08, 2018: Issued final notification. Attached the Qualification Report. Updated the subject and description to add 28L QFN-S. Revised the affected parts list. Provided estimated first ship date on June 08, 2018.

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-02YNJF503_Qual_Report.pdf](#)

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

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at <http://www.microchip.com/PCN> sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.



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."



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: LIAL-02YNJF503

Date
April 04, 2018

Qualification of MMT as an additional assembly site for selected products of 200K wafer technology available in 64L (9x9mm) QFN packages. The selected products available 44L QFN (8x8mm), 28L QFN (6x6mm and 5x5mm), 28L QFN-S (6x6mm and 5x5mm), 20L QFN (5x5mm and 4x4mm), and 16L QFN (4x4mm and 3x3mm) QFN packages will qualify by similarity (QBS).



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for selected products of 200K wafer technology available in 64L (9x9mm) QFN packages. The selected products available 44L (8x8mm), 28L (6x6mm and 5x5mm), 20L (5x5mm and 4x4mm), and 16L (4x4mm and 3x3mm) QFN packages will qualify by similarity (QBS).
CN	ES165007-24262
QUAL ID	Q18025
MP CODE	LEAU1TR4XBXF
Part No.	PIC18F67K22T-I/MR
Bonding No.	BDM-001585 Rev. A
CCB No.	CCB 3220
<u>Package</u>	
Type	64L QFN
Package size	9x9x0.9 mm
Die thickness	11 mils
Die size	163.60 x 159.20 mils
<u>Lead Frame</u>	
Paddle size	291 x 291 mils
Material	C194
Surface	Bare Cu
Process	Stamped
Lead Lock	No
Part Number	10106410
Treatment	BOT
<u>Material</u>	
Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-184500398.000	GRSM418302563.110	1805S41
MMT-184500399.000	GRSM418302563.112	1805S42
MMT-184500400.000	GRSM418302563.111	1805S43

Result

Pass Fail _____

64L QFN (9x9x0.9 mm) assembled by MMT pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC C J-STD-020D	135	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	Electrical Test :+25°C and 85°C System: J750 Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test :+25°C and 85°C System: J750	JESD22-A113	693(0)	693 693 693 0/693	 Pass	Good Devices
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Electrical Test: + 85°C System: J750 Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C System: J750	JESD22-A104	 231(0) 231(0)	231 0/231 231 0/231	 Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: J750 Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X Electrical Test: + 25°C System J750	JESD22-A118	 231(0) 231(0)	231 0/231 231 0/231	 Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.0Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and +85°C System: J750		231(0)	0/231	Pass	77 units / lot
	Stress Condition: +130°C/85%RH,192 hrs. Bias Volt: 5.0 Volts System: HAST 6000X Electrical Test: +25°C System: J750		231(0)	0/231	Pass	
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test : +25°C and 85°C System: J750	JESD22- A103		45		45 units
			45(0)	0/45	Pass	
Solderability Temp 215°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B -102E	22 (0)	22 22 0/22	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B -102E	22 (0)	22 22 0/22	Pass	
Physical Dimensions	Physical Dimension, 10 units/1 lot	JESD22- B100/B10 8	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.50 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	

LIAL-02YNJ 3220.001-3 44L 28L 20L and 16L QFN packages

Affected Catalog Part Numbers(CPN)

A010201-I/MQ
A010201T-I/MQ
AR1100-I/MQ
AR1100T-I/MQ
HA2223-I/ML
HA2223T-I/ML
MCP2200-E/MQ046
MCP2200-I/MQ
MCP2200-I/MQ031
MCP2200-I/MQ046
MCP2200-I/MQRVB
MCP2200T-E/MQ046
MCP2200T-I/MQ
MCP2200T-I/MQ031
MCP2200T-I/MQ046
MCP2200T-I/MQRVB
MCP2210-I/MQ
MCP2210T-I/MQ
MCP2221A-I/ML
MCP2221AT-I/ML
MCP2221-I/ML
MCP2221T-I/ML
MTCH105-I/ML
MTCH105T-I/ML
PIC16F1454-E/ML
PIC16F1454-I/ML
PIC16F1454T-I/ML
PIC16F1455-E/ML
PIC16F1455-I/ML
PIC16F1455-I/MLC02
PIC16F1455T-I/ML
PIC16F1455T-I/MLC02
PIC16F1459-E/ML
PIC16F1459-I/ML
PIC16F1459-I/MLC01
PIC16F1459T-I/ML
PIC16F1459T-I/ML020
PIC16F1459T-I/MLC01
PIC16F1503-E/MG
PIC16F1503-I/MG
PIC16F1503-I/MG031
PIC16F1503-I/MGC02

PIC16F1503T-E/MG
PIC16F1503T-E/MG033
PIC16F1503T-E/MG039
PIC16F1503T-I/MG
PIC16F1503T-I/MG027
PIC16F1503T-I/MG028
PIC16F1503T-I/MG029
PIC16F1503T-I/MG030
PIC16F1503T-I/MG031
PIC16F1503T-I/MG032
PIC16F1503T-I/MG035
PIC16F1503T-I/MG037
PIC16F1503T-I/MG043
PIC16F1503T-I/MG044
PIC16F1503T-I/MG048
PIC16F1503T-I/MGC02
PIC16F1507-E/ML
PIC16F1507-I/ML
PIC16F1507T-E/ML
PIC16F1507T-I/ML
PIC16F1508-E/ML
PIC16F1508-I/ML
PIC16F1508T-E/ML
PIC16F1508T-E/ML025
PIC16F1508T-I/ML
PIC16F1508T-I/MLOPP
PIC16F1509-E/ML
PIC16F1509-I/ML
PIC16F1509-I/ML045
PIC16F1509T-E/ML
PIC16F1509T-I/ML
PIC16F1509T-I/ML045
PIC16F1516-E/ML
PIC16F1516-I/ML
PIC16F1516T-I/ML
PIC16F1518-E/ML
PIC16F1518-I/ML
PIC16F1518T-I/ML
PIC16F1526-E/MR
PIC16F1526-I/MR
PIC16F1526T-I/MR
PIC16F1527-E/MR
PIC16F1527-I/MR
PIC16F1527T-I/MR
PIC16F1613-E/ML
PIC16F1613-I/ML
PIC16F1613T-I/ML

PIC16F1613T-I/ML023
PIC16F1614-E/ML
PIC16F1614-I/ML
PIC16F1614T-I/ML
PIC16F1615-E/ML
PIC16F1615-I/ML
PIC16F1615T-E/ML
PIC16F1615T-I/ML
PIC16F1618-E/ML
PIC16F1618-I/ML
PIC16F1618T-I/ML
PIC16F1619-E/ML
PIC16F1619-I/ML
PIC16F1619T-I/ML
PIC16F1703-E/ML
PIC16F1703-I/ML
PIC16F1703T-I/ML
PIC16F1704-E/ML
PIC16F1704-I/ML
PIC16F1704T-E/ML
PIC16F1704T-I/ML
PIC16F1705-E/ML
PIC16F1705-I/ML
PIC16F1705T-E/ML
PIC16F1705T-I/ML
PIC16F1707-E/ML
PIC16F1707-I/ML
PIC16F1707T-I/ML
PIC16F1708-E/ML
PIC16F1708-E/ML028
PIC16F1708-I/ML
PIC16F1708T-E/ML
PIC16F1708T-E/ML025
PIC16F1708T-E/ML026
PIC16F1708T-E/ML027
PIC16F1708T-E/ML028
PIC16F1708T-E/ML030
PIC16F1708T-I/ML
PIC16F1709-E/ML
PIC16F1709-I/ML
PIC16F1709-I/ML020
PIC16F1709T-E/ML
PIC16F1709T-I/ML
PIC16F1709T-I/ML020
PIC16F1713-E/ML
PIC16F1713-I/ML
PIC16F1713T-I/ML

PIC16F1716-E/ML
PIC16F1716-I/ML
PIC16F1716T-I/ML
PIC16F1717-E/ML
PIC16F1717-I/ML
PIC16F1717T-I/ML
PIC16F1718-E/ML
PIC16F1718-I/ML
PIC16F1718T-I/ML
PIC16F1719-E/ML
PIC16F1719-I/ML
PIC16F1719T-I/ML
PIC16F1764-E/ML
PIC16F1764-I/ML
PIC16F1764T-E/ML
PIC16F1764T-I/ML
PIC16F1765-E/ML
PIC16F1765-I/ML
PIC16F1765T-I/ML
PIC16F1768-E/ML
PIC16F1768-I/ML
PIC16F1768T-E/ML
PIC16F1768T-I/ML
PIC16F1769-E/ML
PIC16F1769-I/ML
PIC16F1769T-E/ML
PIC16F1769T-I/ML
PIC16F1777-E/ML
PIC16F1777-I/ML
PIC16F1777T-I/ML
PIC16F1779-E/ML
PIC16F1779-I/ML
PIC16F1779T-I/ML
PIC16F1782-E/ML
PIC16F1782-I/ML
PIC16F1782T-E/ML
PIC16F1782T-I/ML
PIC16F1783-E/ML
PIC16F1783-I/ML
PIC16F1783T-E/ML
PIC16F1783T-I/ML
PIC16F1784-E/ML
PIC16F1784-I/ML
PIC16F1784T-I/ML
PIC16F1786-E/ML
PIC16F1786-I/ML
PIC16F1786T-I/ML

PIC16F1787-E/ML
PIC16F1787-I/ML
PIC16F1787T-E/ML021
PIC16F1787T-I/ML
PIC16F1787T-I/ML020
PIC16F1788-E/ML
PIC16F1788-I/ML
PIC16F1788T-E/ML
PIC16F1788T-I/ML
PIC16F1789-E/ML
PIC16F1789-I/ML
PIC16F1789T-I/ML
PIC16F1823-E/ML
PIC16F1823-I/ML
PIC16F1823-I/ML029
PIC16F1823-I/MLLS1
PIC16F1823T-E/ML
PIC16F1823T-I/ML
PIC16F1823T-I/ML029
PIC16F1823T-I/MLLS1
PIC16F1824-E/ML
PIC16F1824-I/ML
PIC16F1824T-E/ML
PIC16F1824T-I/ML
PIC16F1824T-I/MLC01
PIC16F1824T-I/MLOPP
PIC16F1825-E/ML
PIC16F1825-H/ML
PIC16F1825-I/ML
PIC16F1825T-E/ML
PIC16F1825T-E/ML031
PIC16F1825T-H/ML
PIC16F1825T-I/ML
PIC16F1826-E/ML
PIC16F1826-I/ML
PIC16F1826T-I/ML
PIC16F1827-E/ML
PIC16F1827-I/ML
PIC16F1827T-I/ML
PIC16F1828-E/ML
PIC16F1828-E/MLC02
PIC16F1828-I/ML
PIC16F1828-I/MLC04
PIC16F1828T-E/ML
PIC16F1828T-I/ML
PIC16F1829-E/ML
PIC16F1829-H/ML

PIC16F1829-I/ML
PIC16F1829-I/ML030
PIC16F1829-I/ML031
PIC16F1829T-E/ML
PIC16F1829T-H/ML
PIC16F1829T-I/ML
PIC16F1829T-I/ML030
PIC16F1829T-I/ML031
PIC16F1847-E/ML
PIC16F1847-I/ML
PIC16F1847T-I/ML
PIC16F1933-E/ML
PIC16F1933-I/ML
PIC16F1933T-E/ML
PIC16F1933T-I/ML
PIC16F1934-E/ML
PIC16F1934-I/ML
PIC16F1934T-I/ML
PIC16F1936-E/ML
PIC16F1936-I/ML
PIC16F1936T-I/ML
PIC16F1937-E/ML
PIC16F1937-I/ML
PIC16F1937T-I/ML
PIC16F1938-E/ML
PIC16F1938-I/ML
PIC16F1938-I/MLRA2
PIC16F1938T-I/ML
PIC16F1938T-I/MLRA2
PIC16F1939-E/ML
PIC16F1939-I/ML
PIC16F1939T-I/ML
PIC16F1946-E/MR
PIC16F1946-I/MR
PIC16F1946T-I/MR
PIC16F1947-E/MR
PIC16F1947-I/MR
PIC16F1947T-I/MR
PIC16F707-E/ML
PIC16F707-I/ML
PIC16F707T-I/ML
PIC16F720-E/ML
PIC16F720-I/ML
PIC16F720T-I/ML
PIC16F721-E/ML
PIC16F721-I/ML
PIC16F721T-E/ML

PIC16F721T-I/ML
PIC16F722A-E/ML
PIC16F722A-I/ML
PIC16F722AT-I/ML
PIC16F722-E/ML
PIC16F722-I/ML
PIC16F722T-I/ML
PIC16F723A-E/ML
PIC16F723A-I/ML
PIC16F723AT-E/ML
PIC16F723AT-I/ML
PIC16F723-E/ML
PIC16F723-I/ML
PIC16F723T-E/ML
PIC16F723T-I/ML
PIC16F724-E/ML
PIC16F724-I/ML
PIC16F724T-I/ML
PIC16F726-E/ML
PIC16F726-I/ML
PIC16F726T-I/ML
PIC16F727-E/ML
PIC16F727-I/ML
PIC16F727T-I/ML
PIC16LF1454-E/ML
PIC16LF1454-I/ML
PIC16LF1454T-I/ML
PIC16LF1455-E/ML
PIC16LF1455-I/ML
PIC16LF1455T-I/ML
PIC16LF1459-E/ML
PIC16LF1459-I/ML
PIC16LF1459-I/MLC01
PIC16LF1459-I/MLC02
PIC16LF1459-I/MLC03
PIC16LF1459T-I/ML
PIC16LF1459T-I/MLC01
PIC16LF1459T-I/MLC02
PIC16LF1459T-I/MLC03
PIC16LF1503-E/MG
PIC16LF1503-I/MG
PIC16LF1503-I/MG022
PIC16LF1503-I/MGC02
PIC16LF1503T-E/MG
PIC16LF1503T-I/MG
PIC16LF1503T-I/MG022
PIC16LF1503T-I/MGC02

PIC16LF1507-E/ML
PIC16LF1507-I/ML
PIC16LF1507T-I/ML
PIC16LF1508-E/ML
PIC16LF1508-I/ML
PIC16LF1508T-I/ML
PIC16LF1509-E/ML
PIC16LF1509-I/ML
PIC16LF1509T-I/ML
PIC16LF1516-E/ML
PIC16LF1516-I/ML
PIC16LF1516T-I/ML
PIC16LF1518-E/ML
PIC16LF1518-I/ML
PIC16LF1518T-I/ML
PIC16LF1526-E/MR
PIC16LF1526-I/MR
PIC16LF1526T-I/MR
PIC16LF1527-E/MR
PIC16LF1527-I/MR
PIC16LF1527T-I/MR
PIC16LF1554-E/ML
PIC16LF1554-I/ML
PIC16LF1554T-I/ML
PIC16LF1559-E/ML
PIC16LF1559-I/ML
PIC16LF1559T-I/ML
PIC16LF1613-E/ML
PIC16LF1613-I/ML
PIC16LF1613T-I/ML
PIC16LF1614-E/ML
PIC16LF1614-I/ML
PIC16LF1614T-I/ML
PIC16LF1615-E/ML
PIC16LF1615-I/ML
PIC16LF1615T-I/ML
PIC16LF1618-E/ML
PIC16LF1618-I/ML
PIC16LF1618T-I/ML
PIC16LF1619-E/ML
PIC16LF1619-I/ML
PIC16LF1619T-I/ML
PIC16LF1703-E/ML
PIC16LF1703-I/ML
PIC16LF1703T-I/ML
PIC16LF1704-E/ML
PIC16LF1704-I/ML

PIC16LF1704T-I/ML
PIC16LF1705-E/ML
PIC16LF1705-I/ML
PIC16LF1705T-I/ML
PIC16LF1707-E/ML
PIC16LF1707-I/ML
PIC16LF1707T-I/ML
PIC16LF1708-E/ML
PIC16LF1708-I/ML
PIC16LF1708T-I/ML
PIC16LF1709-E/ML
PIC16LF1709-I/ML
PIC16LF1709T-I/ML
PIC16LF1713-E/ML
PIC16LF1713-I/ML
PIC16LF1713T-I/ML
PIC16LF1716-E/ML
PIC16LF1716-I/ML
PIC16LF1716T-I/ML
PIC16LF1717-E/ML
PIC16LF1717-I/ML
PIC16LF1717T-I/ML
PIC16LF1718-E/ML
PIC16LF1718-I/ML
PIC16LF1718T-I/ML
PIC16LF1719-E/ML
PIC16LF1719-I/ML
PIC16LF1719T-I/ML
PIC16LF1764-E/ML
PIC16LF1764-I/ML
PIC16LF1764T-I/ML
PIC16LF1765-E/ML
PIC16LF1765-I/ML
PIC16LF1765T-I/ML
PIC16LF1768-E/ML
PIC16LF1768-I/ML
PIC16LF1768T-I/ML
PIC16LF1769-E/ML
PIC16LF1769-I/ML
PIC16LF1769T-I/ML
PIC16LF1777-E/ML
PIC16LF1777-I/ML
PIC16LF1777T-I/ML
PIC16LF1779-E/ML
PIC16LF1779-I/ML
PIC16LF1779T-I/ML
PIC16LF1782-E/ML

PIC16LF1782-I/ML
PIC16LF1782T-I/ML
PIC16LF1783-E/ML
PIC16LF1783-I/ML
PIC16LF1783T-I/ML
PIC16LF1784-E/ML
PIC16LF1784-I/ML
PIC16LF1784T-I/ML
PIC16LF1786-E/ML
PIC16LF1786-I/ML
PIC16LF1786T-I/ML
PIC16LF1787-E/ML
PIC16LF1787-I/ML
PIC16LF1787T-I/ML
PIC16LF1788-E/ML
PIC16LF1788-I/ML
PIC16LF1788T-I/ML
PIC16LF1789-E/ML
PIC16LF1789-I/ML
PIC16LF1789T-I/ML
PIC16LF1823-E/ML
PIC16LF1823-I/ML
PIC16LF1823-I/MLC04
PIC16LF1823-I/MLLS2
PIC16LF1823T-I/ML
PIC16LF1823T-I/MLC04
PIC16LF1823T-I/MLLS2
PIC16LF1824-E/ML
PIC16LF1824-I/ML
PIC16LF1824-I/MLC01
PIC16LF1824T-I/ML
PIC16LF1824T-I/MLC01
PIC16LF1825-E/ML
PIC16LF1825-I/ML
PIC16LF1825T-E/ML
PIC16LF1825T-I/ML
PIC16LF1826-E/ML
PIC16LF1826-I/ML
PIC16LF1826-I/MLC01
PIC16LF1826T-I/ML
PIC16LF1826T-I/MLC01
PIC16LF1827-E/ML
PIC16LF1827-I/ML
PIC16LF1827T-I/ML
PIC16LF1828-E/ML
PIC16LF1828-I/ML
PIC16LF1828T-I/ML

PIC16LF1828T-I/ML025
PIC16LF1829-E/ML
PIC16LF1829-I/ML
PIC16LF1829T-I/ML
PIC16LF1847-E/ML
PIC16LF1847-I/ML
PIC16LF1847T-I/ML
PIC16LF1933-E/ML
PIC16LF1933-I/ML
PIC16LF1933T-I/ML
PIC16LF1934-E/ML
PIC16LF1934-I/ML
PIC16LF1934T-I/ML
PIC16LF1936-E/ML
PIC16LF1936-I/ML
PIC16LF1936T-I/ML
PIC16LF1936T-I/ML020
PIC16LF1937-E/ML
PIC16LF1937-I/ML
PIC16LF1937T-I/ML
PIC16LF1938-E/ML
PIC16LF1938-I/ML
PIC16LF1938-I/MLC01
PIC16LF1938T-E/ML
PIC16LF1938T-I/ML
PIC16LF1938T-I/MLC01
PIC16LF1939-E/ML
PIC16LF1939-I/ML
PIC16LF1939T-I/ML
PIC16LF1946-E/MR
PIC16LF1946-I/MR
PIC16LF1946T-I/MR
PIC16LF1947-E/MR
PIC16LF1947-I/MR
PIC16LF1947T-I/MR
PIC16LF707-E/ML
PIC16LF707-I/ML
PIC16LF707T-I/ML
PIC16LF720-E/ML
PIC16LF720-I/ML
PIC16LF720T-I/ML
PIC16LF721-E/ML
PIC16LF721-I/ML
PIC16LF721T-I/ML
PIC16LF721T-I/ML022
PIC16LF721T-I/ML024
PIC16LF721T-I/ML025

PIC16LF721T-I/ML028
PIC16LF721T-I/ML030
PIC16LF722A-E/ML
PIC16LF722A-I/ML
PIC16LF722AT-I/ML
PIC16LF722-E/ML
PIC16LF722-I/ML
PIC16LF722T-I/ML
PIC16LF723A-E/ML
PIC16LF723A-I/ML
PIC16LF723AT-I/ML
PIC16LF723-E/ML
PIC16LF723-I/ML
PIC16LF723T-I/ML
PIC16LF724-E/ML
PIC16LF724-I/ML
PIC16LF724T-I/ML
PIC16LF726-E/ML
PIC16LF726-I/ML
PIC16LF726T-I/ML
PIC16LF727-E/ML
PIC16LF727-I/ML
PIC16LF727-I/MLC01
PIC16LF727T-I/ML
PIC16LF727T-I/MLC01
PIC18F13K22-E/ML
PIC18F13K22-E/MLC01
PIC18F13K22-I/ML
PIC18F13K22T-I/ML
PIC18F13K22T-I/ML020
PIC18F13K50-I/MQ
PIC18F13K50T-I/MQ
PIC18F14K22-E/ML
PIC18F14K22-I/ML
PIC18F14K22T-E/ML
PIC18F14K22T-I/ML
PIC18F14K50-E/MQ
PIC18F14K50-I/MQ
PIC18F14K50-I/MQ048
PIC18F14K50T-I/MQ
PIC18F14K50T-I/MQ029
PIC18F14K50T-I/MQ039
PIC18F14K50T-I/MQ044
PIC18F14K50T-I/MQ045
PIC18F14K50T-I/MQ047
PIC18F14K50T-I/MQ048
PIC18F23K20-E/ML

PIC18F23K20-I/ML
PIC18F23K20T-E/ML
PIC18F23K20T-I/ML
PIC18F23K22-E/ML
PIC18F23K22-I/ML
PIC18F23K22T-E/ML
PIC18F23K22T-I/ML
PIC18F24K20-E/ML
PIC18F24K20-I/ML
PIC18F24K20T-I/ML
PIC18F24K20T-I/ML028
PIC18F24K22-E/ML
PIC18F24K22-I/ML
PIC18F24K22T-E/ML
PIC18F24K22T-I/ML
PIC18F24K50-E/ML
PIC18F24K50-I/ML
PIC18F24K50T-I/ML
PIC18F25K20-E/ML
PIC18F25K20-I/ML
PIC18F25K20-I/MLC02
PIC18F25K20-I/MLC05
PIC18F25K20-I/MLC10
PIC18F25K20-I/MMLPR
PIC18F25K20T-E/ML
PIC18F25K20T-I/ML
PIC18F25K20T-I/MLC02
PIC18F25K20T-I/MLC10
PIC18F25K22-E/ML
PIC18F25K22-I/ML
PIC18F25K22T-E/ML
PIC18F25K22T-I/ML
PIC18F25K50-E/ML
PIC18F25K50-I/ML
PIC18F25K50T-E/ML
PIC18F25K50T-E/ML020
PIC18F25K50T-E/ML022
PIC18F25K50T-I/ML
PIC18F25K80-E/MM
PIC18F25K80-E/MMC01
PIC18F25K80-H/MM
PIC18F25K80-I/MM
PIC18F25K80-I/MM030
PIC18F25K80-I/MM031
PIC18F25K80-I/MM032
PIC18F25K80-I/MMC02
PIC18F25K80-I/MMC04

PIC18F25K80T-E/MM
PIC18F25K80T-E/MMC01
PIC18F25K80T-E/MMCUI
PIC18F25K80T-H/MM
PIC18F25K80T-I/MM
PIC18F25K80T-I/MM030
PIC18F25K80T-I/MM031
PIC18F25K80T-I/MM032
PIC18F25K80T-I/MMC02
PIC18F25K80T-I/MMC04
PIC18F26K20-E/ML
PIC18F26K20-I/ML
PIC18F26K20-I/ML035
PIC18F26K20-I/ML045
PIC18F26K20-I/ML046
PIC18F26K20-I/ML047
PIC18F26K20-I/ML048
PIC18F26K20-I/ML049
PIC18F26K20-I/ML050
PIC18F26K20-I/MLC03
PIC18F26K20T-E/ML
PIC18F26K20T-I/ML
PIC18F26K20T-I/ML033
PIC18F26K20T-I/ML034
PIC18F26K20T-I/ML035
PIC18F26K20T-I/ML036
PIC18F26K20T-I/ML040
PIC18F26K20T-I/ML043
PIC18F26K20T-I/ML045
PIC18F26K20T-I/ML046
PIC18F26K20T-I/ML047
PIC18F26K20T-I/ML048
PIC18F26K20T-I/ML049
PIC18F26K20T-I/ML050
PIC18F26K20T-I/ML051
PIC18F26K20T-I/ML052
PIC18F26K20T-I/ML053
PIC18F26K20T-I/ML054
PIC18F26K20T-I/ML055
PIC18F26K20T-I/MLC03
PIC18F26K22-E/ML
PIC18F26K22-I/ML
PIC18F26K22T-E/ML
PIC18F26K22T-I/ML
PIC18F26K22T-I/ML024
PIC18F26K80-E/MM
PIC18F26K80-H/MM

PIC18F26K80-I/MM
PIC18F26K80T-E/MM
PIC18F26K80T-I/MM
PIC18F26K80T-I/MM023
PIC18F26K80T-I/MM025
PIC18F43K20-E/ML
PIC18F43K20-I/ML
PIC18F43K20T-I/ML
PIC18F43K22-E/ML
PIC18F43K22-I/ML
PIC18F43K22T-I/ML
PIC18F44K20-E/ML
PIC18F44K20-I/ML
PIC18F44K20T-I/ML
PIC18F44K22-E/ML
PIC18F44K22-I/ML
PIC18F44K22T-I/ML
PIC18F45K20-E/ML
PIC18F45K20-I/ML
PIC18F45K20-I/MLC01
PIC18F45K20-I/MLC05
PIC18F45K20T-I/ML
PIC18F45K20T-I/MLC01
PIC18F45K20T-I/MLC05
PIC18F45K22-E/ML
PIC18F45K22-I/ML
PIC18F45K22T-I/ML
PIC18F45K80-E/ML
PIC18F45K80-H/ML
PIC18F45K80-I/ML
PIC18F45K80T-E/ML
PIC18F45K80T-I/ML
PIC18F46K20-E/ML
PIC18F46K20-I/ML
PIC18F46K20T-E/ML
PIC18F46K20T-I/ML
PIC18F46K22-E/ML
PIC18F46K22-I/ML
PIC18F46K22T-E/ML
PIC18F46K22T-I/ML
PIC18F46K80-E/ML
PIC18F46K80-H/ML
PIC18F46K80-I/ML
PIC18F46K80T-E/ML
PIC18F46K80T-I/ML
PIC18F65K22-E/MR
PIC18F65K22-I/MR

PIC18F65K22T-E/MR
PIC18F65K22T-I/MR
PIC18F65K80-E/MR
PIC18F65K80-H/MR
PIC18F65K80-I/MR
PIC18F65K80T-I/MR
PIC18F65K90-E/MR
PIC18F65K90-I/MR
PIC18F65K90T-I/MR
PIC18F66K22-E/MR
PIC18F66K22-I/MR
PIC18F66K22T-E/MR
PIC18F66K22T-I/MR
PIC18F66K80-E/MR
PIC18F66K80-H/MR
PIC18F66K80-I/MR
PIC18F66K80T-I/MR
PIC18F66K90-E/MR
PIC18F66K90-I/MR
PIC18F66K90T-I/MR
PIC18F67K22-E/MR
PIC18F67K22-I/MR
PIC18F67K22-I/MRRSL
PIC18F67K22T-I/MR
PIC18F67K22T-I/MRRSL
PIC18F67K90-E/MR
PIC18F67K90-I/MR
PIC18F67K90-I/MRRSL
PIC18F67K90T-I/MR
PIC18LF13K22-E/ML
PIC18LF13K22-I/ML
PIC18LF13K22-I/ML023
PIC18LF13K22T-I/ML
PIC18LF13K22T-I/ML023
PIC18LF13K22T-I/ML024
PIC18LF13K50-I/MQ
PIC18LF13K50T-I/MQ
PIC18LF14K22-E/ML
PIC18LF14K22-I/ML
PIC18LF14K22T-E/ML
PIC18LF14K22T-E/ML021
PIC18LF14K22T-I/ML
PIC18LF14K50-I/MQ
PIC18LF14K50T-I/MQ
PIC18LF23K22-E/ML
PIC18LF23K22-I/ML
PIC18LF23K22T-I/ML

PIC18LF23K22T-I/ML020
PIC18LF23K22T-I/ML021
PIC18LF24K22-E/ML
PIC18LF24K22-I/ML
PIC18LF24K22T-I/ML
PIC18LF24K50-E/ML
PIC18LF24K50-I/ML
PIC18LF24K50T-I/ML
PIC18LF25K22-E/ML
PIC18LF25K22-I/ML
PIC18LF25K22T-I/ML
PIC18LF25K50-E/ML
PIC18LF25K50-I/ML
PIC18LF25K50T-I/ML
PIC18LF25K80-I/MM
PIC18LF25K80T-I/MM
PIC18LF26K22-E/ML
PIC18LF26K22-I/ML
PIC18LF26K22-I/MLC04
PIC18LF26K22-I/MLC05
PIC18LF26K22-I/MLC06
PIC18LF26K22T-E/ML
PIC18LF26K22T-I/ML
PIC18LF26K22T-I/ML024
PIC18LF26K22T-I/MLC02
PIC18LF26K22T-I/MLC04
PIC18LF26K22T-I/MLC05
PIC18LF26K22T-I/MLC06
PIC18LF26K80-I/MM
PIC18LF26K80-I/MMC01
PIC18LF26K80T-I/MM
PIC18LF26K80T-I/MMC01
PIC18LF43K22-E/ML
PIC18LF43K22-I/ML
PIC18LF43K22T-I/ML
PIC18LF44K22-E/ML
PIC18LF44K22-I/ML
PIC18LF44K22T-I/ML
PIC18LF45K22-E/ML
PIC18LF45K22-I/ML
PIC18LF45K22T-I/ML
PIC18LF45K80-I/ML
PIC18LF45K80T-I/ML
PIC18LF46K22-E/ML
PIC18LF46K22-I/ML
PIC18LF46K22T-I/ML
PIC18LF46K80-I/ML

PIC18LF46K80T-I/ML
PIC18LF65K80-I/MR
PIC18LF65K80T-I/MR
PIC18LF66K80-I/MR
PIC18LF66K80T-I/MR
PIC24F04KA201-I/MQ
PIC24F04KL101-E/MQ
PIC24F04KL101-I/MQ
PIC24F04KL101T-I/MQ
PIC24F08KA101-E/MQ
PIC24F08KA101-I/MQ
PIC24F08KA101T-E/MQ
PIC24F08KA101T-I/MQ
PIC24F08KA101T-I/MQC02
PIC24F08KA102-E/ML
PIC24F08KA102-I/ML
PIC24F08KL201-E/MQ
PIC24F08KL201-I/MQ
PIC24F08KL201T-I/MQ
PIC24F08KL301-E/MQ
PIC24F08KL301-I/MQ
PIC24F08KL301T-I/MQ
PIC24F08KL301T-I/MQ020
PIC24F08KL302-E/ML
PIC24F08KL302-I/ML
PIC24F08KL302-I/MQ
PIC24F08KL302T-I/MQ
PIC24F08KL401-E/MQ
PIC24F08KL401-I/MQ
PIC24F08KL402-I/ML
PIC24F08KL402-I/MQ
PIC24F08KM202-I/ML
PIC24F16KA101-E/MQ
PIC24F16KA101-I/MQ
PIC24F16KA101T-E/MQ
PIC24F16KA101T-I/MQ
PIC24F16KA102-E/ML
PIC24F16KA102-I/ML
PIC24F16KA102T-I/ML
PIC24F16KA302-I/ML
PIC24F16KA302T-I/ML
PIC24F16KA304-I/ML
PIC24F16KA304T-I/ML
PIC24F16KL401-E/MQ
PIC24F16KL401-I/MQ
PIC24F16KL401T-I/MQ
PIC24F16KL402-E/MQ

PIC24F16KL402-I/ML
PIC24F16KL402-I/MQ
PIC24F16KL402T-I/ML
PIC24F16KL402T-I/MQ
PIC24F16KM102-I/ML
PIC24F16KM202-E/ML
PIC24F16KM202-I/ML
PIC24F16KM204-E/ML
PIC24F16KM204-I/ML
PIC24F32KA302-E/ML
PIC24F32KA302-I/ML
PIC24F32KA302T-E/ML
PIC24F32KA302T-I/ML
PIC24F32KA304-E/ML
PIC24F32KA304-I/ML
PIC24F32KA304T-I/ML
PIC24FV08KM202-I/ML
PIC24FV16KA302-I/ML
PIC24FV16KA302T-I/ML
PIC24FV16KA304-I/ML
PIC24FV16KA304T-I/ML
PIC24FV16KM102-I/ML
PIC24FV16KM202-E/ML
PIC24FV16KM202-I/ML
PIC24FV16KM202T-I/ML
PIC24FV16KM204-I/ML
PIC24FV32KA302-I/ML
PIC24FV32KA302T-I/ML
PIC24FV32KA304-E/ML
PIC24FV32KA304-I/ML
PIC24FV32KA304T-I/ML
UTC2000/MG
UTC2000-E/MG
UTC2000-I/MG
UTC2000T/MG
UTC2000T-E/MG
UTC2000T-I/MG