# Product Change Notification / LIAL-26JIWI938

## Date:

04-Jul-2022

## Product Category:

Wireless IC

## PCN Type:

Manufacturing Change

## Notification Subject:

CCB 5172 Initial Notice: Qualification of UTL as a new assembly site for MICRF112YMU-TR catalog part number (CPN) available in 10L X2DFN (2x2x0.4mm) package.

## Affected CPNs:

LIAL-26JIWI938_Affected_CPN_07042022.pdf
LIAL-26JIWI938_Affected_CPN_07042022.csv

## Notification Text:

**PCN Status:**Initial Notification

**PCN Type:**Manufacturing Change

**Microchip Parts Affected:**Please open one of the files found in the Affected CPNs section.
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**Qualification of UTL as a new assembly site for MICRF112YMU-TR catalog part number (CPN) available in 10L X2DFN (2x2x0.4mm) package.

**Pre and Post Change Summary:**

| | Pre Change | Post Change |
|---|---|---|

| Assembly Site | | Unisem (M) Berhad Perak, Malaysia / (UNIS) | UTAC Thai Limited (UTL-1) LTD. / (UTL) |
|---|---|---|---|
| Wire Material | | Au | Au |
| Die Attach Material | | CRM1076NS | 558-2C31 |
| Molding Compound Material | | G770HCD | G700LTD |
| Lead-Frame | Material | * Au-Ni-Au | C194 |
| | Paddle Size | 43 X 55 mils (1.1x1.4mm) | 51 x 67mils (1.3x1.7 mm) |
| | DAP Surface Prep | Au-Ni-Au | PPF |
| | See attached pre and post change comparison | | |

*Note: Lead frame comes with Cu base, which is to be etched of before PMC (Post mold cure).

**Impacts to Data Sheet:**None

**Change Impact**None

**Reason for Change:**To improve productivity by qualifying UTL as a new assembly site.

**Change Implementation Status:**In Progress

**Estimated Qualification Completion Date:**March 2023

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:**

| | **July 2022** | | | | | -> | **March 2023** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Workweek | 27 | 28 | 29 | 30 | 31 | | 10 | 11 | 12 | 13 | 14 |
| 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:**July 4, 2022: 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.

## Attachments:

PCN_LIAL-26JIWI938_Qual Plan.pdf
PCN_LIAL-26JIWI938_Pre and Post Change Summary.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

**Terms and Conditions:**

If you wish to receive Microchip PCNs via email please register for our PCN email service at our PCN home page select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the PCN FAQ section.

If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

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# QUALIFICATION PLAN SUMMARY

## PCN #: LIAL-26JIWI938

**Date**
**June 23, 2022**

## Qualification of UTL as a new assembly site for MICRF112YMU-TR catalog part number (CPN) available in 10L X2DFN (2x2x0.4mm) package.

Purpose: Qualification of UTL as a new assembly site for MICRF112YMU-TR catalog part number (CPN) available in 10L X2DFN (2x2x0.4mm) package.

| | | |
|---|---|---|
| Misc. | Assembly site | UTL |
| | BD Number | BD-000783 (01) |
| | MP Code (MPC) | UAAA1YK9AA01 |
| | Part Number (CPN) | MICRF112YMU-TR |
| | MSL information | MSL 1, 260C |
| | Assembly Shipping Media (T/R, Tube/Tray) | T&R |
| | Base Quantity Multiple (BQM) | 5000 |
| | Reliability Site | SJO |
| | CCB No. | 5172 |
| Lead-Frame | Paddle size | 51 x 67mils (1.3x1.7 mm) |
| | Material | C194 |
| | DAP Surface Prep | PPF |
| | Treatment | No |
| | Process | Etched |
| | Lead-lock | Yes |
| | Part Number | FRxxxx |
| | Lead Plating | NiPdAu |
| | Strip Size | 70x250 mm |
| | Strip Density | 2470 |
| Bond Wire | Material | Au |
| Die Attach | Part Number | 558-2C31 |
| | Conductive | Yes |
| MC | Part Number | G700LTD |
| PKG | PKG Type | X2DFN (xDFN) |
| | Pin/Ball Count | 10 |
| | PKG width/size | 2x2x0.4mm |

| 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 | ATE Test Site | REL Test Site | Pkg. Type | Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Pb-free Solderability | J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing.<br>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 | Unisem | SJO | X2DFN | Standard Pb-free solderability is the requirement.<br>SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes. |
| Wire Bond Pull - WBP | Mil. Std. 883-2011 | 5 | 0 | 1 | 5 | 0 fails after TC | 5 | Unisem | SJO | X2DFN | 30 bonds from a min. 5 devices. |
| Wire Bond Shear - WBS | CDF-AEC-Q100-001 | 5 | 0 | 1 | 5 | 0 | 5 | Unisem | SJO | X2DFN | 30 bonds from a min. 5 devices. |
| Bond Line Thickness (BLT) robustness assessment | | | | | | >0.5 mils | | Unisem | SJO | X2DFN | |
| Wire Sweep | | | | | | | | Unisem | SJO | X2DFN | Required for any reduction in wire bond thickness. |
| Physical Dimensions | Measure per JESD22 B100 and B108 | 10 | 0 | 3 | 30 | 0 | 5 | Unisem | SJO | X2DFN | |

| **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** | **ATE Test Site** | **REL Test Site** | **Pkg. Type** | **Special Instructions** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| External Visual | Mil. Std. 883-2009/2010 | All devices prior to submission for qualification testing | 0 | 3 | ALL | 0 | 5 | Unisem | SJO | X2DFN | |
| 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 and +85°C.. MSL 1, 260°C | 231 | 15 | 3 | 738 | 0 | 15 | Unisem | SJO | X2DFN | Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test. |
| HAST | +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and +85°C | 77 | 5 | 3 | 246 | 0 | 10 | Unisem | SJO | X2DFN | Spares should be properly identified. Use the parts which have gone through Pre-conditioning. |
| UHAST | +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs.<br>Electrical test pre and post stress at +25°C | 77 | 5 | 3 | 246 | 0 | 10 | Unisem | SJO | X2DFN | Spares should be properly identified. Use the parts which have gone through Pre-conditioning. |

| 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 | ATE Test Site | REL Test Site | Pkg. Type | Special Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Temp Cycle | -65°C to +150°C for 500 cycles.<br>Electrical test pre and post stress at room temp and +85°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. | 77 | 5 | 3 | 246 | 0 | 15 | Unisem | SJO | X2DFN | Spares should be properly identified. Use the parts which have gone through Pre-conditioning.**).** |

# CCB#: 5172
# Pre and Post Change Summary
# PCN #:LIAL-26JIWI938

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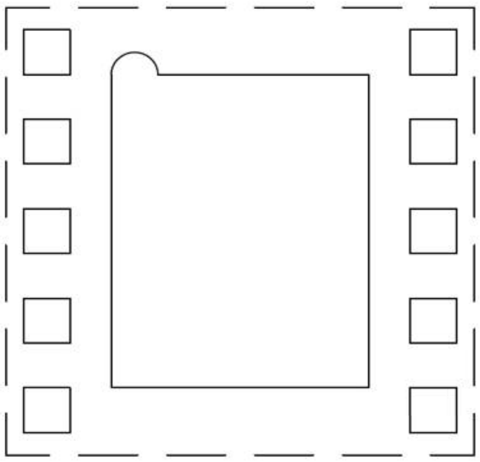
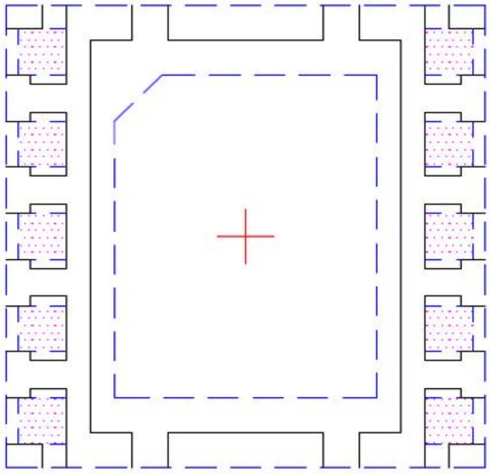
SMART | CONNECTED | SECURE

# Pre and Post Change Comparison

| Pre Change | Post Change |
|---|---|
|  |  |

LIAL-26JIWI938 - CCB 5172 Initial Notice: Qualification of UTL as a new assembly site for MICRF112YMU-TR

Affected Catalog Part Numbers(CPN)

MICRF112YMU-TR