



Product Change Notification - RMES-01ULEW599

Date:

08 Jan 2020

Product Category:

Others; Clock and Timing - Clock Generation; Clock and Timing - Oscillators

Affected CPNs:**Notification subject:**

CCB 3859 and 3859.001 Initial Notice: Qualification of new bill of materials (BOM) in selected Micrel products available in 6L VDFN (3.2x2.5x0.9mm) package at NSEB assembly site.

Notification text:**PCN Status:**

Initial 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 new bill of materials (BOM) in selected Micrel products available in 6L VDFN (3.2x2.5x0.9mm) package at NSEB assembly site.

Pre Change:

Using NEX-130CT & 8200T die attach, G770HCD molding compound and Q3-6646 die coat material

Post Change:

Using HR-5104 & 2200D die attach, G700LTD molding compound and JCR6109 die coat material

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	NSEB	NSEB
Wire material	Au	Au
Die attach material 1	NEX-130CT	HR-5104
Die attach material 2	8200T	2200D
Molding compound material	G770HCD	G700LTD
Die Coat material	Q3-6646	JCR6109
Lead frame material	A194	A194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability and productivity by qualify new bill of materials (BOM).

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

January 2020

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:

	December 2019				January 2020				
Workweek	49	50	51	52	01	02	03	04	05
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:

December 02, 2019: Issued initial notification.

January 08, 2019: Re-issued initial notification to add CCB 3589.001. Updated the affected CPN list and Qualification plan.

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_RMES-01ULEW599_Qual_Plan.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.

Affected Catalog Part Numbers (CPN)

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MICROCHIP

QUALIFICATION PLAN SUMMARY

PCN #: RMES-01ULEW599

**Date:
August 21, 2019**

Qualification of new bill of materials (BOM) in selected Micrel products available in 6L VDFN (3.2x2.5x0.9mm) package at NSEB assembly site. The selected Micrel products available in 6L VDN (2.5x2.0x0.9mm) package will qualify by similarity (QBS). This is Q100 Grade 1 qualification.

Purpose: _____ Qualification of new bill of materials (BOM) in selected Micrel products available in 6L VDFN (3.2x2.5x0.9mm) package at NSEB assembly site. The selected Micrel products available in 6L VDN (2.5x2.0x0.9mm) package will qualify by similarity (QBS). This is Q100 Grade 1 qualification.

MP code: _____ 3610Q5H5A001

Part No.: _____ D50C-M3

BD No: _____ BDE-005636 Rev.02

CCB No.: _____ 3859 and 3859.001

Package:

Type: _____ 6L VDFN COL

Width or Size: _____ 3.2 x 2.5 x 0.9 mm

Leadframe:

Part Number: _____ FR0510

Paddle Size: _____ COL

Material: _____ A194

Pad Plating: _____ Roughened NiPdAu

Process: _____ Etched

Lead-lock (Y/N): _____ Yes

Lead Finish: _____ NiPdAu

LF Thickness: _____ 8 mils

Wire:

Material: _____ Au

Die Attach Epoxy:

Part Number: _____ HR-5104

Conductive: _____ No

Part Number: _____ 2200D

Conductive: _____ Yes

Mold Compound: _____ G700LTD

Die Coat: _____ JCR6109

Test Name	Conditions	Reliability Stress Read Point	Pre & Post Reliability Stress Test Temperature	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
Package Reliability Tests													
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hours of 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		UTL		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.
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	1	5	0 fails after TC	5		UTL		30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5	0	5		UTL		30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30	0	5		UTL		
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5		UTL		

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	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
HTSL (High Temp Storage Life)	JESD22-A103 +150°C	Grade 1: 1000 hrs (150°C)	Grade 1: +25°C, +125°C	45	5	1	50	0	21 - 83	UTL	UTL		Spares should be properly identified.
Preconditioning - Required for surface mount devices	J-STD-020JESD22-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. MSL 1@260°C		Grade 1: +25°C	231	15	3	738	0	15	UTL	UTL		Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C,+125°C	77	5	3	246	0	10 - 14	UTL	MTAI		Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UFAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C	77	5	3	246	0	10	UTL	UTL		Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 and Appendix 3 -65°C to +150°C	Grade 1: 500 cycles (-65°C to 150°C)	Grade 1: +125°C	77	5	3	246	0	15 - 60	UTL	UTL		Spares should be properly identified. Use the parts which have gone through Pre-conditioning.