



Product Change Notification / ALAN-14CQYK486

Date:

28-Oct-2022

Product Category:

Low-Med Voltage Power Modules

PCN Type:

Manufacturing Change

Notification Subject:

CCB 3582.001 Final Notice: Qualification of inductor LQM21PNR47MCH# for selected Micrel MIC38150HYHL-TR catalog part number (CPN) available in 28L VQFN (4x6x0.9mm) package.

Affected CPNs:

[ALAN-14CQYK486_Affected_CPN_10282022.pdf](#)
[ALAN-14CQYK486_Affected_CPN_10282022.csv](#)

Notification Text:

PCN Status:Final 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 inductor LQM21PNR47MCH# for selected Micrel MIC38150HYHL-TR catalog part number (CPN) available in 28L VQFN (4x6x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change
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Assembly Site		Unisem (M) Berhad (UNIS)	Unisem (M) Berhad (UNIS)
Wire material		Au	Au
Die attach material		8290	8290
Molding compound material		G770HCD	G770HCD
Lead frame material		A194	A194
Inductor	Material	74479977147	LQM21PNR47MCH#
	Inductance	0.47uH	0.47uH
	Package dimension	2 x1.6 x 0.5 mm	1.25 x 2.0 x 0.5 mm

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve manufacturability by qualifying inductor LQM21PNR47MCH#.

Change Implementation Status:In Progress

Estimated First Ship Date:December 30, 2022 (date code: 2253)

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

Time Table Summary:

	November 2021					>	December 2022				
Workweek	4 5	4 6	4 7	4 8	4 9		4 9	5 0	5 1	5 2	5 3
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:November 18, 2021: Issued final notification.

October 28, 2022: Re-issued final notification. Updated the inductor material in post change, description of change and reason for change from LQM21PNR47MCHL to LQM21PNR47MCH#. Updated the EFSD from December 30, 2021, to December 30, 2022. Updated the affected CPN list to remove CPN MIC38300HYHL-TR.

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

Attachments:

[PCN_ALAN-14CQYK486_Pre and Post Change_Summary.pdf](#)
[PCN_ALAN-14CQYK486_Qual_Report.pdf](#)

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

Terms and Conditions:

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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.

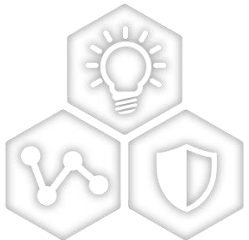
Affected Catalog Part Numbers (CPN)

MIC38150HYHL-TR

CCB 3582.001
Pre and Post Change Summary
PCN# ALAN-14CQYK486



A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

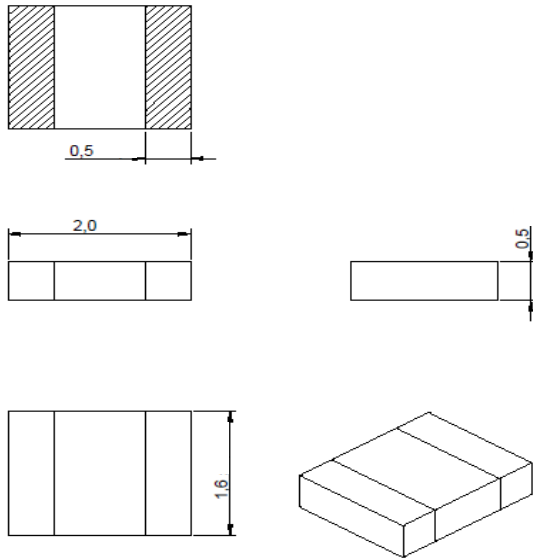


SMART | CONNECTED | SECURE

Pre and Post Change Summary

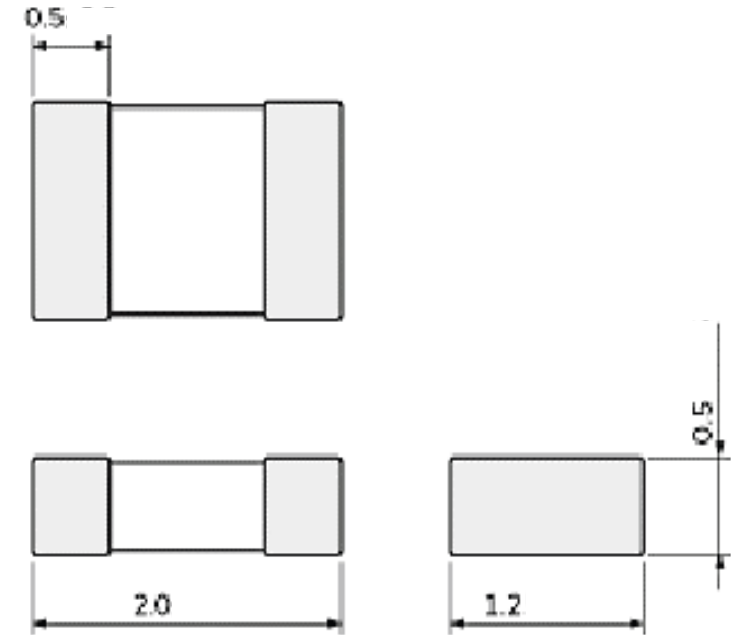
Pre Change

Dimensions: [mm]



Inductor Part Number	74479977147
Package	2 x 1.6 x 0.5 mm

Post Change



Inductor Part Number	LQM21PNR47MCHL
Package	1.25 x 2.0 x 0.5 mm



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: ALAN-14CQYK486

Date:
June 1, 2017

**Qualification of inductor LQM21PNR47MCH# for selected Micrel
MIC38150HYHL-TR catalog part number (CPN) available in 28L
VQFN (4x6x0.9mm) package.**



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose Qualification of inductor LQM21PNR47MCH# for selected Micrel MIC38150HYHL-TR catalog part number (CPN) available in 28L VQFN (4x6x0.9mm) package.

CCB No. 3582.001

PACKAGE QUALIFICATION REPORT

Test	Testing Condition	Rejection Number/ Sample size	Result
Shear Test	Force : 10 N Hold Duration : 5s ±1s Applied direction : Parallel to substrate	0/10	Passed
Bending Test	Substrate : Glass-epoxy (100mm × 40mm × 1.0mm) Deflection : 2mm Hold Duration : 30s Pressure jig : R230	0/10	Passed
Vibration	Oscillation Frequency : 10Hz to 2000Hz for 20 min Total amplitude 3.0 mm or Acceleration amplitude 245m/s ² whichever is smaller. Testing Time : A period of 4 h in each of 3 mutually perpendicular directions	0/10	Passed
Drop	It shall be dropped on concrete or steel board Method : free fall Height : 1m Total of 10 cycles	0/10	Passed
Solderability	Flux : Ethanol solution of rosin 25(wt)% Pre-Heating : 150°C±10°C, 0s to 90s Solder : Sn-3.0Ag-0.5Cu Solder Temperature : 240°C±5°C Immersion Time : 3s ± 1s	0/10	Passed
Resistance to Soldering Heat	Flux : Ethanol solution of rosin 25(wt)% Pre-Heating : 150°C±10°C, 60s to 90s Solder : Sn-3.0Ag-0.5Cu Solder Temperature : 270°C±5°C Immersion Time : 10s ± 1s	0/10	Passed
Heat Resistance	Temperature : 85°C±2°C Time : 1000h(+48h,-0h)	0/10	Passed
Cold Resistance	Temperature : -40°C±2°C Time : 1000h(+48h,-0h)	0/10	Passed
Humidity	Temperature : 40°C±2°C Humidity : 90%(RH) to 95%(RH) Time : 1000h(+48h,-0h)	0/10	Passed
Temperature Cycle	Cycle condition 1 step : -40°C± 2°C, 30 min ± 3 min 2 step : Ordinary Temp. , 10 min to 15 min 3 step : 85°C± 2°C , 30 min ± 3 min 4 step : Ordinary Temp. , 10 min to 15 min Cycle : 100 cycles	0/10	Passed