



Initial Product/Process Change Notification

Document #: IPCN24518X

Issue Date: 07 Apr 2022

Title of Change:	Addition of Greatek as package assembly site for QFN-32 4X4 NCP4549x product series and QFN-16 3X3 NCS37015x and NCS37014x product series including a gold to copper wire conversion for QFN-16 products.
Proposed First Ship date:	31 Oct 2022 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Peter.Vo@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >
Marking of Parts/ Traceability of Change:	Affected parts can be identified by the assembly site code on the package marking traceability code.
Change Category:	Assembly Change
Change Sub-Category(s):	Material Change, Manufacturing Site Addition

Sites Affected:

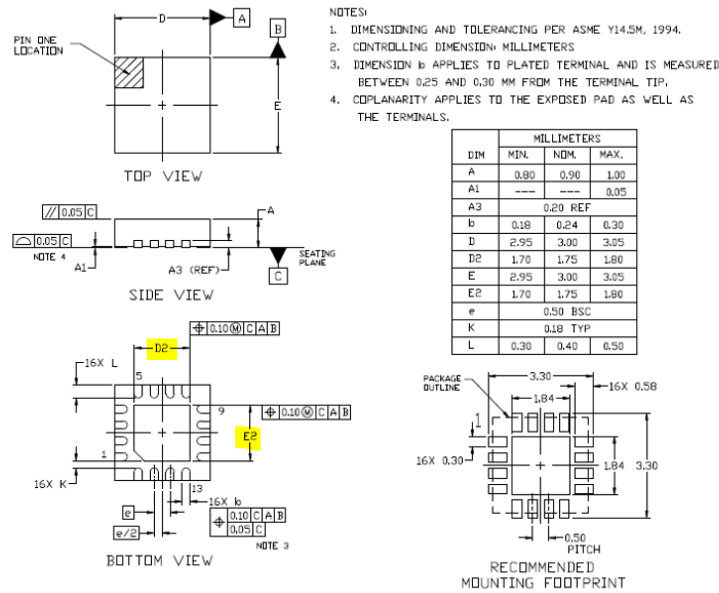
onsemi Sites	External Foundry/Subcon Sites
None	Greatek Electronics Inc., Taiwan

Description and Purpose:

This change notification is to inform the pending qualification of Greatek Electronics Inc. located in Taiwan to be added as an additional site for the assembly of QFN-32 4X4 MM packages of NCP4549x product series and QFN-16 3X3 MM packages of NCS37015x and NCS37014x product series. Along with the site qualification, the QFN-16 affected parts also include a bond wire material change from gold wire to copper wire. Material BOM at Greatek are standard material for the package types. For the QFN-16 affected parts, the case outline dimensions D2 and E2 tolerances for the exposed pad have increased by 0.10 mm. This does not affect the Recommended Mounting Footprint shown on the case outline drawing. This site addition allows for added manufacturing capacity while also allowing to mitigate future supply chain constraints. There is no change to the product marking.

	Before Change Description		After Change Description	
Assembly Site	UTAC Thailand Site 1		UTAC Thailand Site 1	Greatek Site 1 and Site 3
Die Attach	Henkel ABLETHERM 8600		Henkel ABLETHERM 8600	Hitachi EN4900LR
Bond Wire	QFN-16: Gold		QFN-16: Gold	QFN-16: Copper
Mold Compound	Sumitomo G770HCD		Sumitomo G770HCD	Sumitomo G700HA
Case Outline Dimensions D2 & E2	QFN-16 only. See illustration below for D2 and E2 dimensions.		QFN-16 only. See illustration below for D2 and E2 dimensions.	
	Dimension	Before (MIN, NOM, MAX) mm	Dimension	After (MIN, NOM, MAX) mm
	D2	1.70, 1.75, 1.80	D2	1.65, 1.75, 1.85
	E2	1.70, 1.75, 1.80	E2	1.65, 1.75, 1.65

Illustration of case outline showing the exposed pad dimensions D2 and E2.



Qualification Plan:

QV DEVICE NAME: NCS37014MNTWG
RMS : TBD
PACKAGE: QFN-16 3X3

Test	Specification	Condition	Interval
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs
HTSL	JESD22-A103	Ta= 150°C	1008 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
PC	J-STD-020 JESD-A113	MSL 3 @ 260°C	
RSH	JESD22- B106	Ta = 265C, 10 sec	
SD	JSTD002	Ta = 245C, 5 sec	



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Issue Date: 07 Apr 2022

QV DEVICE NAME: NCP45491XMNTWG

RMS : TBD

PACKAGE: QFN-32 4X4

Test	Specification	Condition	Interval
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs
HTSL	JESD22-A103	Ta= 150°C	1008 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
PC	J-STD-020 JESD-A113	MSL 3 @ 260°C	
RSH	JESD22- B106	Ta = 265C, 10 sec	
SD	JSTD002	Ta = 245C, 5 sec	

Estimated date for qualification completion: 1 June 2022

List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the **PCN Customized Portal**.

Part Number	Qualification Vehicle
NCS37015MNTWG	NCS37014MNTWG
NCS37014MNTWG	NCS37014MNTWG
NCP45491XMNTWG	NCP45491XMNTWG
NCP45492XMNTWG	NCP45491XMNTWG
NCP45495XMNTWG	NCP45491XMNTWG

Appendix A: Changed Products**PCN#: IPCN24518X**
Issue Date: Apr 06, 2022

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCS37014MNTWG		NCS37014MNTWG	NA	
NCP45492XMNTWG		NCP45491XMNTWG	NA	
NCP45495XMNTWG		NCP45491XMNTWG	NA	
NCP45491XMNTWG		NCP45491XMNTWG	NA	