

Product / Process Change Notice

PCN No.: Q000-PCN-TL201807-01

Date: 2018-08-09.

Change Title: <u>Add Greatek as new testing site for NAU8814YG product.</u> Change Classification: ☒ Major ☐ Minor Change item: ☐ Design ☐ Raw Material ☐ Wafer FAB ☐ Package Assembly ☒ Testing ☐ Others: _____.			
Affected Product(s) : The affected product is NAU8814YG.			
Description of Change(s) : Add new testing site for NAU8814YG at Greatek (Greatek Electronics Inc, Taiwan) as the 2nd source for back up. Greatek is a qualified vendor for Nuvoton in testing process. <u>New Supplier</u> Greatek Electronics Inc, Taiwan (hereinafter "Greatek"), (136, Gung-Yi Rd., Chunan Cheng, Miaoli Hsien, 350, Tawin)			
Reason for Change(s) : To increase manufacturing capacity and flexibility and to have multiple manufacturing routes for backup in case of disruption, Nuvoton is adding a new testing source of NAU8814YG product at Greatek.			
Impact of Change(s) : (positive & negative) Form: No change. Fit: No change. Function: No change. Reliability: No concern.			
Qualification Plan/ Results : 1. Passed the testing machine correlation qualification, please refer to appendix A for the details. 2. Approval is necessary as early as possible to start manufacturing.			
Implementation Plan : ☐ Date Code: _____ onward ☐ Lot No.: _____ onward ☐ Implemented date: <u>Nov. 07, 2018 (scheduled)</u>			
Originator:	H.Y. Lai / Q100	Approval:(QRA Director)	C.M. Lin/ Q000
Contact for Questions & Concerns	Name: <u>HYLai</u> TEL: <u>886-3-5770066 (ext. 31226)</u> FAX: <u>886-3-5792673.</u> Address: <u>No.4, Creation Rd. III Science-Based Industrial Park Hsinchu, Taiwan, R.O.C..</u> E-mail: <u>hylai0@nuvoton.com.</u>		

Customer Comments:

Note: Please sign this notice, and return to **Nuvoton** contact within **30** days. If no response is received within **30** days, this Change Request will be assumed to meet your approval.

☐ Approval	☐ Disapproval	☐ Conditional Approval: _____.
Date: _____	Dept. name: _____	Person in charge: _____.

Follow-up and Tracing:

A. copies to

FAB: ☐ Integration _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____.

Test / Product: ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____.

Design/ Marketing: ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____.

Production control/ Others: ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____.

B. Changes:

1. Document / Test program:

Document No/ test program	Document name/ test program name	Version		Responsible	Completed date	Remark
		before	after			
NA	NA	NA	NA	NA	NA	NA

Verified by: _____.

Appendix A: The testing machine correlation report

Abstract

As part of Nuvoton's efforts to extend production flexibility and options, as well as manufacturing capacity to meet customer expectations in the context of business continuity planning for the NAU8814YG. Nuvoton is releasing this product to Greatek as a second testing source as well as test program release on the CMA3650 ATE platform. This platform is already used by Nuvoton as a mainstream platform for equivalent, high-volume products.

Detailed Correlation Summary

The correlation process, we use 3914pcs Bin 1 parts and 3pcs bad rejects and tested the units at both sites. Test program used is version "E" which is running in production at time of correlation.

Results

1. 100% match for Bin 1 parts between Nuvoton site and Greatek site.
2. Test correlation on bad rejects is 3 units & match for fails.

The results of the correlation checks are summarized in the following table.

Golden NAU8814 parts	Total	Pass Chroma	Failed Chroma	Yield	Meets correlation criteria
Lot 2703B004-AE (Nuvoton)	3914pcs	3914pcs	0pcs	100.00%	Yes
Lot 2703B004-AE (Greatek)	3914pcs	3914pcs	0pcs	100.00%	Yes

Golden NAU8814 rejects	Total	Pass Chroma	Failed Chroma	Miss-correlation	Meets correlation criteria
Lot 2703B004-AE (Nuvoton)	3pcs	0pcs	3pcs	0pcs	Yes
Lot 2703B004-AE (Greatek)	3pcs	0pcs	3pcs	0pcs	Yes
Total NAU8814 rejected parts	3pcs	0pcs	3pcs	0.00%	Yes

Correlation results for both Golden good units and for Golden rejects meet Nuvoton's criteria for new final test platform approval and the additional platform is therefore approved for production release by Nuvoton, pending customer approval of the respective PCN.