



Process/Product Change Notification Form

Doc no: PCN-27

Notice Date:	Nov 1, 2019
Title:	Addition of UTAC for SiTime's ceramic package
Effective Date:	January 31, 2020

Type of Change:	<input type="checkbox"/> Product	<input type="checkbox"/> Process/Material	<input checked="" type="checkbox"/> Other: assembly location
Level of Change	<input type="checkbox"/> Major	<input checked="" type="checkbox"/> Minor	<input type="checkbox"/> Information Only

Products Affected: SiTime's products in Ceramic package (Table-1)

Reason for Change: Additional ceramic package capacity

Description of Change: SiTime is in process of qualifying UTAC, Thailand, as an additional package assembly site for ceramic package assembly and final test. As customer demand for ceramic package unit shipments increases, it is necessary to add additional capacity for our ceramic packages. UTAC is a qualified high-volume product supplier for SiTime since 2009 for assembly and final test services.

As with our current product/package offerings, all products from UTL1 are MSL 1 (260 ° C peaks reflow) compliant and meet the industry/regulatory product environmental requirements (e.g. RoHS/Green/REACH/PFOS). Ceramic package manufactured at UTL1 is form, fit, function, and reliability compatible with existing ceramic package currently available. Furthermore, there is no change in POD (product out-line dimensions) and electrical performance of package built at UTAC. There is no significant difference in BOM between UTAC and current assembly subcon. The reliability qualification plan is shown in Appendix-1. The qualification report is expected to be available no later than Jan 17, 2020.

Upon effective date of this notification, SiTime will ship products using ceramic package assembled and tested at any of our qualified suppliers (including UTAC) to meet increasing demand for our products. Samples are currently available upon request. Please contact our sales and customer service representatives for sample request or any clarifications.

Note: With acceptance of customer, product built in UTAC can be shipped earlier then the notice of this PCN.



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Table-1 Product List

- SiT5146
- SiT5147
- SiT5155
- SiT5156
- SiT5157
- SiT5346
- SiT5347
- SiT5348
- SiT5349
- SiT5351
- SiT5352
- SiT5356
- SiT5357
- SiT5901
- SiT5902
- SiT5903
- SiT5904
- SiT5906
- SIT5908

Contact: Jim Pedicord

Title: Sr Director WW Operations & QA

E-mail: jpedicord@sitime.com

Customer Acknowledgement:

SiTime records indicate that you require notification of this change. For Major and Minor changes, please use the acknowledgement line at the end of this PCN or e-mail to approve or request additional information. If SiTime does not receive any response within 30 days of this notice, it will be considered as acceptance of this change.

Effect of Change: None Description below (ea. Product Quality, Performance, Reliability)

Document/s Attached: No Yes

Quality Assurance: _____

Acknowledgement of Receipt: _____

Date: _____



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Customer Representative

Customer's Company: _____

Change Level Description: (as per JESD46):

Major Change: Process/Product change affecting form, fit, function, quality and reliability of the product. Customer acknowledgement is requested.

Minor Change: Process/Product change not affecting form, fit, function, quality and reliability of the product. Customer acknowledgement is requested.

Information Only: Customer response is not required. Change effectiveness immediate.

Appendix-1 Qualification Plan

Type of Stress	Test Condition / Ref. Standard	Sample Size: SS/# lots	Estimated Completion Date
Preconditioning (MSL1)	J-STD-020 JESD22-A113 Bake 24hrs at 125C 85°C/85% R.H. for 168hrs IR reflow 3X @ 260°C peak flow	260	
Temp Cycle @ 500 cycles	JESD22-A104, cond C: -65°C/150°C/500cycles	77/3	
BHAST @ 264 hrs	JESD22-A118, Ta = +110°C, 85% R.H.	77/3	
UHAST @ 96hrs	JESD22-A118, Ta = +130°C, 85% R.H.	77/3	
Solderability	J-STD-002D 95% coverage	5/3	
Gross/Fine leak	MIL-STD-883 Method 2014	15/3	
Lid Torque	MIL-STD-883 Method 2024	5/3	
Die Shear	MIL-STD-883 Method 2019	5/3	
Internal Vapor	MIL-STD-883 Method 1018	5/3	
Physical Dimensions (inline data from Assembly)	All dimensions of POD	20 /3	
Bond Pull Strength	MIL-STD-883	30/3	
	M2011		



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Bond Shear	JESD22-B116	30/3	
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