



Cypress Semiconductor Corporation, 198 Champion Court, San Jose, CA 95134. Tel: (408) 943-2600

PRODUCT CHANGE NOTIFICATION

PCN: PCN193704

Date: September 12, 2019

Subject: Qualification of Cypress Thailand as an Additional Assembly Site and PTI-SG as an Additional Wafer Bumping Site for Select 252-Ball Flip Chip FBGA (FCFBGA) IoT Products

Change Type: Major

Description of Change:

Cypress announces the qualification of Cypress Thailand (BKK- 229, MOO 4, Changwattana Road Pakkred, Nonthaburi 11120 Thailand) as an additional assembly site for select 252-Ball Flip Chip FBGA, 9x9x1.05mm package. Cypress also announces the qualification of Powertech Technology Inc. Singapore (PTI-SG – 12 Ang Mo Kio Street 65, Singapore 569060) as an additional wafer bumping site for 40nm Low Power technology.

252-Balls FCFBGA Package Wafer Bumping Sites as below:

Assembly Site	ASE, Taiwan/SPIL, Taiwan/Signetics, Korea (Current Supplier)	Cypress Thailand (New Qualified Site)
Wafer Bumping Site	TSMC-Taiwan	PTI-Singapore

Compositions of the wafer bump material and dielectrics used for RDL are identical between TSMC-Taiwan and PTI-Singapore. The Flip Chip FBGA (FCFBGA) products are ROHS compliant.

The Cypress Thailand's Bill of Materials for 252-Ball FCFBGA package are identical to that used at the current Assembly supplier.

252-Balls FCFBGA Packages Assembly Bill of Materials as below:

Material	ASE, Taiwan/ SPIL, Taiwan/ Signetics, Korea BOM (Current Supplier)	Cypress Thailand BOM (Newly Qualified Site)
Mold Compound	Panasonic CV8710TAC (ASE and SPIL) Panasonic CV8715CT (Signetics Korea)	Panasonic CV8710TAC

Material	ASE, Taiwan/ SPIL, Taiwan/ Signetics, Korea BOM (Current Supplier)	Cypress Thailand BOM (Newly Qualified Site)
Substrate	Laminate Substrate	Laminate Substrate-same design and substrate construction as current supplier
Solder Bump Material	Ultra-Low Alpha (<0.0020cph/cm ²) 98.2Sn/1.8Ag	Ultra-Low Alpha (<0.0020cph/cm ²) 98.2Sn/1.8Ag
Solder Ball Diameter	0.25mm	0.25mm
Solder Ball Material	98.25Sn/1.2Ag/0.5Cu/0.05Ni	98.25Sn/1.2Ag/0.5Cu/0.05Ni

Select IoT FCFBGA packages assembled at Cypress Thailand carry enhanced traceability which allows each unit to be traceable to specific assembly equipment used to process that unit. The traceability is enabled using a serial number, called “unit code” which is the last additional line of marking to the current top mark. The unit code will allow for faster response time to our customers.

Benefit of Change:

Qualification of alternate manufacturing sites is part of Cypress’ continuous improvement in our flexible manufacturing initiative providing Cypress with the added capability to meet upside market demand, reduce business continuity risk, and ensure consistent and reliable delivery to customers in dynamic, changing market conditions as well as enhanced capability for unit level traceability.

Part Numbers Affected: 3

See the attached ‘Affected Parts List’ file for a list of all part numbers affected by this change. Note that any new parts that are introduced after the publication of this PCN will include all changes outlined in this PCN.

Qualification Status:

These products have been qualified through a series of tests documented in the Qualification Test Plan QTP#184909. This qualification report can be found as an attachment to this PCN.

Sample Status:

Qualification samples may not be built ahead of time for all part numbers affected by this change. Please review the attached ‘Affected Parts List’ file for a list of affected part numbers with their associated sample ordering part numbers. Samples are subject to lead times of 30 days. If you require qualification samples, please contact your local Cypress sales representative as soon as possible, preferably within 30 days of the date of this PCN, to place any sample orders.

Approximate Implementation Date:

Effective 90 days from the date of this notification or upon customer approval, whichever comes first, all shipments of the affected part numbers in the attached file will be assembled at Cypress BKK assembly site.

Anticipated Impact:

Products assembled at the new site are completely compatible with existing products from form, fit, functional, parametric and quality performance perspectives.

Cypress also recommends that customers take this opportunity to review these changes against current application notes, system design considerations and customer environment conditions to assess impact (if any) to their application.

Method of Identification:

Cypress maintains traceability of product to wafer level, including wafer fabrication location, through the lot number marked on the package.

Response Required:

No response is required.

For additional information regarding this change, contact your local sales representative or contact the PCN Administrator at pcn_adm@cypress.com.

Sincerely,

Cypress PCN Administration

Marketing Part Number

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