



Cypress Semiconductor Corporation – An Infineon Technologies Company
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PRODUCT CHANGE NOTIFICATION

PCN: PCN204601

Date: November 10, 2020

Subject: Transfer of Assembly Operations to Greatek Electronics Inc. for Select 48-Lead SSOP Package

To: PHILIP MAILLET
FUTURE
pcn.system2@future.ca

Change Type: Major

Description of Change:

Cypress announces the qualification of Greatek Electronics Inc., Taiwan located at No. 136, Gong-Yi Rd., Zhunan Township, Miaoli County 350, Taiwan, as an alternate assembly site for select Memory and PSOC products offered in 48-Lead SSOP (300mil) package.

These products are currently processed at Jiangsu Changjiang Electronics Technology Co., Ltd (JCET), Cypress' subcontractor in China and IFX CML. The transfer of assembly operations to Greatek is motivated by JCET's phasing out (i.e., End-Of-Life) of SSOP manufacturing operations, as previously announced in advance PCN (APCN 201001)

Given the imminent phase out of operations at JCET, and the dynamically changing market conditions, Cypress is pleased to offer supply of changed material (i.e., Greatek assembled product) ahead of the implementation date. Customers are strongly encouraged to avail of this option, where production volumes of Greatek assembled product can be secured and shipped against current orders. Please contact your Cypress Sales Representative for more information on availing this option.

Greatek is certified by international quality and safety standards, namely, ISO 9001, IATF 16949, ISO 14001, and ISO 26262. These certificates, along with their Sony Green Partnership certificate, can be viewed on their corporate web site: <http://www.greatek.com.tw/>

BOM Comparison:

The SSOP package will be assembled at Greatek using an industry standard set of Bill of Materials (BOM). Please see table below for a comparison of BOM between Greatek and JCET.

The 48-Lead SSOP package is assembled at Greatek using the following Bill of Materials (BOM):

Material	Greatek Taiwan BOM	JCET China BOM	IFX CML BOM
Leadframe	Cu Leadframe	PPF/Cu Leadframe	PPF Leadframe
Leadfinish	Pure Sn	NiPdAu/Pure Sn	NiPdAu
Die Attach Material	Hitachi EN-4900GC	Henkel QMI-509	Henkel QMI-509
Wire	0.8 mil CuPdAu wire	0.8/ 0.9mil Au wire/ 0.8mil CuPd wire	0.8/0.9mil Au wire / 0.8mil Cu/CuPdAu wire
Mold Compound	Sumitomo EME-G700SLA	Kyocera KE-G3000DA-CY/ Kyocera KE-G6000DA-CY/ Sumitomo EME G620B	Kyocera KE-G3000DA-CY

Benefit of Change:

Qualification of alternative manufacturing sites provides the means for Cypress to ensure business continuity on the stated products, and thereby meet long-term market demand and delivery commitments to customers after the phase out of operations at JCET.

Part Numbers Affected: 46

See the attached 'Affected Parts List' file for a list of all part numbers affected by this change. Note that any new parts introduced after the publication of this PCN will be assembled at Greatek.

Qualification Status:

Greatek has been qualified through a series of tests documented in the Qualification Test Plans summarized in the table below. These qualification reports can be found as attachments to this PCN or by visiting www.cypress.com and typing the QTP number in the keyword search window.

QTP Number	Qualification Purpose
202303	SP48 Package Qual at Greatek Taiwan
202410	SP48 Package Qual_Leopard Device at Greatek Taiwan

Sample Status:

Samples are available now, unless there is an indication that the sample ordering part numbers are subject to lead times. 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 Greatek sample ordering part numbers.

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 notification.

Approximate Implementation Date:

Effective immediately upon customer approval, or 90 days from the date of this notification, whichever comes first, shipments on part numbers in the attached file will be primarily sourced from Greatek. Customers should expect to receive JCET assembled product for a transitional

period, until inventory is depleted. For Automotive PPAP part numbers this change will be effective upon customer approval.

Anticipated Impact:

Products assembled at Greatek 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 this change against current application notes, system design considerations and customer environment conditions to assess impact (if any) to their application.

Method of Identification:

Cypress also 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

Cypress Semiconductor Package Qualification Report

QTP# 202410 VERSION
October 2020**

**48L SSOP (300 mils)
Pure Sn Leadfinish
MSL3, 260°C Reflow
Greatek-Taiwan (IG)**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
reliability@cypress.com**

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PACKAGE QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
202303	48L SSOP (300 mils) Package Qualification at Greatek-Taiwan (IG)	October 2020
202410	48L SSOP (300 mils) Package Qualification at Greatek-Taiwan (IG) (Larger Die)	October 2020

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	SP48
Package Outline, Type, or Name:	48L SSOP (300 mils)
Mold Compound Name/Manufacturer:	EME-G700SLA/Sumitomo
Mold Compound Flammability Rating:	V0 UL94
Oxygen Rating Index: >28%	54%
Lead Frame Designation:	Full Metal Paddle
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Saw Process
Die Attach Supplier:	Hitachi
Die Attach Material:	EN-4900GC
Bond Diagram Designation	002-30327
Wire Bond Method:	Thermosonic
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	002-26450
Name/Location of Assembly (prime) facility:	Greatek-Taiwan (G)
MSL Level	3
Reflow Profile	260

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Acoustic Microscopy	J-STD-020 Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Ball Shear	JESD22-B116 Cpk : 1.33, Ppk : 1.66	P
Bond Pull	MIL-STD-883 – Method 2011, Cpk : 1.33, Ppk : 1.66	P
Constructional Analysis	Criteria: Meet external and internal characteristics of Cypress package	P
Die Shear	MIL-STD-883, Method 2019	P
Dye Penetrant Test	Test to determine the existence and extent of cracks, Criteria: No Package Crack	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V, 1000V, 1250V JESD22-C101	P
Final Visual Inspection	JESD22-B101	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110: 130°C, 85%RH, 3.3V / 5.5V Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
High Accelerated Saturation Test (HAST) - Unbiased	JEDEC STD 22-A110: 130°C, 85%RH Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
High Temp Storage	JESD22-A103: 175°C, no bias	P
Internal Visual Inspection	MIL-STD-883-2014	P
Physical Dimension	MIL-STD-1835, JESD22-B100	P
Pressure Cooker Test	JESD22-A102, 121°C, 100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Solderability, Steam Aged	J-STD-002, JESD22-B102 95% solder coverage minimum	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
X-Ray	MIL-STD-883 - 2012	P

Reliability Test Data

QTP #: 202303

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: ACOUSTIC, MSL3								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	22	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	22	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	22	0	
STRESS: BALL SHEAR								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	30	0	
STRESS: BOND PULL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	30	0	
STRESS: CONSTRUCTIONAL ANALYSIS								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	5	0	
STRESS: DIE SHEAR								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	5	0	
STRESS: DYE PENETRANT TEST								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	15	0	
STRESS: ESD-CHARGE DEVICE MODEL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	9	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	1000	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	1250	3	0	

Reliability Test Data

QTP #: 202303

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: FINAL VISUAL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	1000	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	751	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	700	0	
STRESS: HI-ACCEL SATURATION TEST- UNBIASED (130C, 85%RH), PRE COND 192 HR 30C/60%RH (MSL3)								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	96	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	96	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	96	80	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 3.3V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	96	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	96	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	96	30	0	
STRESS: HIGH TEMP STORAGE								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	80	0	
STRESS: INTERNAL VISUAL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
STRESS: PHYSICAL DIMENSION								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	10	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	10	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	10	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	168	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	168	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	168	80	0	
STRESS: SOLDERABILITY TEST								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	3	0	

Reliability Test Data

QTP #: 202303

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
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STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3

CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	500	79	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	500	80	0	

STRESS: X-RAY

CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	15	0	

Reliability Test Data

QTP #: 202410

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: ACOUSTIC, MSL3								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	22	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	22	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	22	0	
STRESS: BALL SHEAR								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	30	0	
STRESS: BOND PULL								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	30	0	
STRESS: CONSTRUCTIONAL ANALYSIS								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	5	0	
STRESS: DIE SHEAR								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	5	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	5	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	5	0	
STRESS: DYE PENETRANT TEST								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	15	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	15	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	15	0	
STRESS: FINAL VISUAL								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	499	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	500	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	531	0	

Reliability Test Data

QTP #: 202410

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: HI-ACCEL SATURATION TEST- UNBIASED (130C, 85%RH), PRE COND 192 HR 30C/60%RH (MSL3)								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	96	80	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 5.5V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	96	30	0	
STRESS: HIGH TEMP STORAGE (175C)								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	500	80	0	
STRESS: INTERNAL VISUAL								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	5	0	
STRESS: PHYSICAL DIMENSION								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	30	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	30	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	168	30	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	500	80	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	500	80	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	500	80	0	
STRESS: X-RAY								
CY8C3866PVI (8C38661A)	SP48	3006010	612021881	IG-Taiwan	COMP	15	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021879	IG-Taiwan	COMP	15	0	
CY8C3866PVI (8C38661A)	SP48	3006010	612021880	IG-Taiwan	COMP	15	0	

Document History Page

Document Title: QTP#202410: 48L SSOP (300 mils) PURE SN LEADFINISH MSL3, 260C REFLOW GREATEK-TAIWAN (IG)
Document Number: 002-31641

Rev.	ECN No.	Orig. of Change	Description of Change
**	7004872	HSTO	Initial release.

Cypress Semiconductor Package Qualification Report

QTP# 202303 VERSION
October 2020**

**48L SSOP (300 mils)
Pure Sn Leadfinish
MSL3, 260°C Reflow
Greatek-Taiwan (IG)**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PACKAGE QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
202303	48L SSOP (300 mils) Package Qualification at Greatek-Taiwan (IG)	October 2020

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	SP48
Package Outline, Type, or Name:	48L SSOP (300 mils)
Mold Compound Name/Manufacturer:	EME-G700SLA/Sumitomo
Mold Compound Flammability Rating:	V0 UL94
Oxygen Rating Index: >28%	54%
Lead Frame Designation:	Full Metal Paddle
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Saw Process
Die Attach Supplier:	Hitachi
Die Attach Material:	EN-4900GC
Bond Diagram Designation	002-30327
Wire Bond Method:	Thermosonic
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	002-26450
Name/Location of Assembly (prime) facility:	Greatek-Taiwan (G)
MSL Level	3
Reflow Profile	260

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Acoustic Microscopy	J-STD-020 Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Ball Shear	JESD22-B116 Cpk : 1.33, Ppk : 1.66	P
Bond Pull	MIL-STD-883 – Method 2011, Cpk : 1.33, Ppk : 1.66	P
Constructional Analysis	Criteria: Meet external and internal characteristics of Cypress package	P
Die Shear	MIL-STD-883, Method 2019	P
Dye Penetrant Test	Test to determine the existence and extent of cracks, Criteria: No Package Crack	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V, 1000V, 1250V JESD22-C101	P
Final Visual Inspection	JESD22-B101	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110: 130°C, 85%RH, 3.3V Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
High Accelerated Saturation Test (HAST) - Unbiased	JEDEC STD 22-A110: 130°C, 85%RH Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
High Temp Storage	JESD22-A103: 175°C, no bias	P
Internal Visual Inspection	MIL-STD-883-2014	P
Physical Dimension	MIL-STD-1835, JESD22-B100	P
Pressure Cooker Test	JESD22-A102, 121°C, 100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Solderability, Steam Aged	J-STD-002, JESD22-B102 95% solder coverage minimum	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
X-Ray	MIL-STD-883 - 2012	P

Reliability Test Data

QTP #: 202303

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: ACOUSTIC, MSL3								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	22	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	22	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	22	0	
STRESS: BALL SHEAR								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	30	0	
STRESS: BOND PULL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	30	0	
STRESS: CONSTRUCTIONAL ANALYSIS								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	5	0	
STRESS: DIE SHEAR								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	5	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	5	0	
STRESS: DYE PENETRANT TEST								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	15	0	
STRESS: ESD-CHARGE DEVICE MODEL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	9	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	1000	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	1250	3	0	

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<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: FINAL VISUAL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	1000	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	751	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	700	0	
STRESS: HI-ACCEL SATURATION TEST- UNBIASED (130C, 85%RH), PRE COND 192 HR 30C/60%RH (MSL3)								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	96	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	96	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	96	80	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 3.3V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	96	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	96	30	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	96	30	0	
STRESS: HIGH TEMP STORAGE								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	80	0	
STRESS: INTERNAL VISUAL								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	5	0	
STRESS: PHYSICAL DIMENSION								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	10	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	10	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	10	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	168	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	168	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	168	80	0	
STRESS: SOLDERABILITY TEST								
CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	3	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	3	0	

Reliability Test Data

QTP #: 202303

<i>Device</i>	<i>Package</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
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STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3

CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	500	80	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	500	79	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	500	80	0	

STRESS: X-RAY

CY14B101KA* (7CP1401B1D) SP48		3943111	612022954	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022955	IG-Taiwan	COMP	15	0	
CY14B101KA* (7CP1401B1D) SP48		3943111	612022953	IG-Taiwan	COMP	15	0	

Document History Page

Document Title: QTP# 202303: 48L SSOP (300 MILS) PURE SN LEADFINISH, MSL3, 260C REFLOW,
GREATEK-TAIWAN (IG)
Document Number: 002-31579

Rev.	ECN No.	Orig. of Change	Description of Change
**	6990798	JYF	Initial release.



Material Composition Declaration

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This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

Adobe Reader version 7.0.5 is required to complete this declaration.

IPC Web Site for Information on IPC-1752 Standard
<http://www.ipc.org/IPC-175x>

Form Type *

Declaration Class *

Supplier Information

Company Name *	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *					
Authorized Representative *	Title - Representative	Phone - Representative *	Email - Representative *		Supplier Comments or URL for Additional Information			
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
Alternate Recommendation				Alternate Item Comments				

Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
			C	seconds	

Comments

Save the fields in this form to a file

Import fields from a file into this form

Clear all of the fields on this form

Lock the fields on this form to prevent changes

RoHS Material Composition Declaration

Declaration Type *

RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium

RoHS Declaration *

Supplier Acceptance *

Exemptions: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.

Declaration Signature

Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.

Supplier Digital Signature

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Line Functions: +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
											-	+	

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AFFECTED MPNS

CY14B101KA-SP25XI
CY14B101KA-SP25XIT
CY14B101KA-SP45XI
CY14B101KA-SP45XIT
CY14B101LA-SP25XI
CY14B101LA-SP25XIT
CY14B101LA-SP45XI
CY14B101LA-SP45XIT
CY14B256KA-SP25XI
CY14B256KA-SP25XIT
CY14B256KA-SP45XI
CY14B256KA-SP45XIT
CY14B256LA-SP25XI
CY14B256LA-SP25XIT
CY14B256LA-SP45XI
CY14B256LA-SP45XIT
CY8C20536A-24PVXI
CY8C20536A-24PVXIT
CY8C20546A-24PVXI
CY8C20546A-24PVXIT
CY8C27643-24PVXI
CY8C27643-24PVXIT
CY8C29666-24PVXI
CY8C29666-24PVXIT
CY8C3244PVI-133
CY8C3244PVI-133T
CY8C3245PVI-134
CY8C3245PVI-134T
CY8C3245PVI-150
CY8C3245PVI-150T
CY8C3246PVI-122
CY8C3246PVI-122T
CY8C3246PVI-147
CY8C3246PVI-147T
CY8C3445PVI-094
CY8C3445PVI-094T
CY8C3866PVI-021
CY8C3866PVI-021T
CY8C3866PVI-070
CY8C3866PVI-070T
CY8C9540A-24PVXI
CY8C9540A-24PVXIT
CG10060AM
CG10060AMT
CG8950AM
CG8950AMT