



209 – FBGA (14 x 22 x 1.76 mm) Pb-Free Package

PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	BW	Body Size (mil/mm)	14x22x1.76 mm
Package Weight – Site 1	1,114.0800 mg	Package Weight – Site 2	N/A

SUMMARY

The 209-FBGA Pb-Free package is compliant to RoHS. Cypress Ordering Part Numbers containing an “X” (e.g. CY7C1328G-133AXI, CY2308SXC-1HT) meet the Directive 2002/95/EC (RoHS) requirement.

ASSEMBLY Site 1 – Package Qualification Report #s 051708 (Note 1)

I. DECLARATION OF PACKAGED UNITS

A. BANNED SUBSTANCES

Materials from Level A of the EIA/JIG/JGPSSI/EICTA Material Composition Declaration Guide and EU RoHS. Listed in the table below are materials that are neither contained nor intentionally added to this product.

Substances / Compounds	Weight by mg	PPM	Analysis Report (Note 2)
Cadmium and Cadmium Compounds	0	< 5.0	CoA-BW209-G
Hexavalent Chromium and its Compounds	0	< 5.0	
Lead and Lead Compounds	0	< 5.0	
Mercury and Mercury Compounds	0	< 5.0	
Polybrominated Biphenyls (PBB)	0	< 5.0	
Polybrominated Diphenylethers (PBDE)	0	< 5.0	
Asbestos	0	0	As per MSDS
Azo colorants	0	0	As per MSDS
Ozone Depleting Substances	0	0	As per MSDS
Polychlorinated Biphenyls (PCBs)	0	0	As per MSDS
Polychlorinated Naphthalenes	0	0	As per MSDS
Radioactive Substances	0	0	As per MSDS
Shortchain Chlorinated Paraffins	0	0	As per MSDS
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	0	0	As per MSDS
Tributyl Tin Oxide (TBTO)	0	0	As per MSDS
Formaldehyde	0	0	As per MSDS

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.

Note 2: Report available from Cypress Sales Offices or Distributors.

Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered “non-existent in the product”. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor material information are calculated using MSDS, Material Analysis Reports and Cypress Assembly sites information

Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B. MATERIAL COMPOSITION (Note 3)

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogenous material	PPM	% weight of substance per package
Substrate	Base Material	SiO ₂	60676-86-0	41.6999	11.0000%	37,430	3.7430%
		Acrylic	Trade Secret, 29690-82-2	37.9090	10.0000%	34,027	3.4027%
		Epoxy	68541-56-0, 25068-38-6	30.3272	8.0000%	27,222	2.7222%
		Bisphenol	13676-54-5	56.8635	15.0000%	51,041	5.1041%
		Triazol	25722-66-1	66.3408	17.5000%	59,548	5.9548%
		Cu	7440-50-8	137.9888	36.4000%	123,859	12.3859%
		Ni	7440-02-0	5.6864	1.5000%	5,104	0.5104%
		Au	7440-57-5	2.0850	0.5500%	1,871	0.1871%
Solder Ball	External Plating	Br	7726-95-6	0.1895	0.0500%	170	0.0170%
		Sn	7440-31-5	167.3638	95.5000%	150,226	15.0226%
		Ag	7440-22-4	7.0100	4.0000%	6,292	0.6292%
Die Attach	Adhesive	Cu	7440-50-8	0.8763	0.5000%	787	0.0787%
		Fused silica	60676-86-0	41.0778	54.0000%	36,871	3.6871%
		Diester	Trade Secret	20.9193	27.5000%	18,777	1.8777%
		Epoxy Resin	Trade Secret	4.1839	5.5000%	3,755	0.3755%
		Functionalized esters	Trade Secret	7.6070	10.0000%	6,828	0.6828%
Die	Circuit	Polymeric resin	Trade Secret	2.2821	3.0000%	2,048	0.2048%
		Silicon	7440-21-3	69.9200	100.0000%	62,760	6.2760%
Wire	Interconnect	Au	7440-57-5	8.4292	99.9900%	7,566	0.7566%
		Ion Impurities	Trade Secret	0.0008	0.0100%	1	0.0001%
Mold Compound	Encapsulation	Silica Fused	60676-86-0	360.7348	89.0000%	323,796	32.3796%
		Epoxy resin A	Trade Secret	22.2926	5.5000%	20,010	2.0010%
		Phenol resin	Trade Secret	22.2926	5.5000%	20,010	2.0010%

Package Weight (mg): 1114.0800

% Total: 100.0000

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

II. DECLARATION OF PACKAGING / INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tape & Reel	Cover tape	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-COVT-R
	Carrier tape	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-CART-R
	Plastic Reel	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-PLRL-R
Tray	Tray	< 2.0	< 2.0	< 2.0	< 2.0	-----	-----	CoA-TRAY-R
Others	Shielding bag	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-SBAG -R
	Moisture Barrier bag	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-MBBG-R
	Protective Band	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-PROB-R
	Shipping and Inner Box	< 10.0	< 4.0	< 4.0	< 5.0	-----	-----	CoA-ABOX-R

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Document History Page

Document Title: 209 - FBGA (14 x 22 x 1.76 mm) Pb- Free Package PMDD
Document Number: 001-05049

Rev.	ECN No.	Orig. of Change	Description of Change
**	399402	YXP	New Specification
*A	2567373	HLR	Changed Cypress Logo Added % weight of substance per Homogenous Material and % weight of substance per package on the Material Composition table. Completed the RoHS Substances namely; Lead Cadmium, Mercury, Chromium VI, PBB and PBDE on Declaration of Packaging Indirect Materials table.
		DCon	Removed inactive distribution E-CML to WEB
*B	2751570	HLR	Updated CAS number of Gold (Au) and Added CAS number for Bromine (Br).
*C	3001216	HLR	Changed the Reference Package QTP Report.
*D	3359611	HLR	Updated the material composition table to reflect 4 decimal places on values.

Distribution: WEB

Posting: None

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