



209 Side by Side– 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	1,184.6772 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 102505

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-GQ
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
Mold Compound	Encapsulation	Silica, vitreous	60676-86-0	416.3040	88.5000%	351,407	35.1407%
		Material-Other Epoxy resins	Proprietary	18.8160	4.0000%	15,883	1.5883%
		Material-Other Phenolic resins	Proprietary	14.1120	3.0000%	11,912	1.1912%
		Carbon black	1333-86-4	2.3520	0.5000%	1,985	0.1985%
		Metal Hydroxide	Proprietary	14.1120	3.0000%	11,912	1.1912%
		Crystalline Silica	14808-60-7	4.7040	1.0000%	3,971	0.3971%
Substrate	Core	Organic resin	105391-33-1 1156-51-0 9003-36-5	73.2875	27.5000%	61,863	6.1863%
		Inorganic filler	21645-51-2	73.2875	27.5000%	61,863	6.1863%
		Glass fiber	65997-17-3	119.9250	45.0000%	101,230	10.1230%
	Copper foil	Copper	7440-50-8	144.0424	99.9600%	121,588	12.1588%
		Arsenic	7440-38-2	0.0576	0.0400%	49	0.0049%
	Solder mask	Organic resin	Proprietary	12.3500	65.0000%	10,425	1.0425%
		Inorganic filler	Proprietary	6.6500	35.0000%	5,613	0.5613%
	Nickel Plating	Nickel	7440-02-0	10.4000	100.0000%	8,779	0.8779%
	Gold Plating	Gold	7440-57-5	1.1000	100.0000%	929	0.0929%
DIE1	Circuit	Silicon	7440-21-3	18.7327	100.0000%	15,812	1.5812%
DIE2	Circuit	Silicon	7440-21-3	8.1325	100.0000%	6,865	0.6865%
Die Attach-1	Adhesive	Novolac Epoxy resin	Proprietary	0.1531	13.0000%	129	0.0129%
		Phenol resin	Proprietary	0.1531	13.0000%	129	0.0129%
		Amorphous Silica	68611-44-9	0.0471	4.0000%	40	0.0040%
		Acrylic Copolymer	Proprietary	0.8246	70.0000%	696	0.0696%
Die Attach-2	Adhesive	Novolac Epoxy resin	Proprietary	0.0694	13.0000%	59	0.0059%
		Phenol resin	Proprietary	0.0694	13.0000%	59	0.0059%
		Amorphous Silica	68611-44-9	0.0214	4.0000%	18	0.0018%
		Acrylic	Proprietary	0.3738	70.0000%	316	0.0316%

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		Copolymer					
Gold Wire	Interconnect	Au	7440-57-5	35.8380	99.0000%	30,251	3.0251%
		Pd	7440-05-3	0.3620	1.0000%	306	0.0306%
Solder Ball	External Plating	Sn	7440-31-5	199.0220	95.5000%	167,997	16.7997%
		Ag	7440-22-4	8.3360	4.0000%	7,037	0.7037%
		Cu	7440-50-8	1.0420	0.5000%	880	0.0880%
				1184.6772	1200.0000%	1,000,000	100.0000%

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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

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Rev.	ECN No.	Orig. of Change	Description of Change
**	3424642	mohe	New Specification

Distribution: WEB

Posting: None

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