



119-FBGA (14 x 22 mm) Non Pb-Free Package

PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)

Cypress Package Code	BB	Body Size (mil/mm)	14 x 22 mm
Package Weight – Site 1	1,324.0200 mg	Package Weight – Site 2	N/A

SUMMARY

The 119-FBGA is a Non Pb-Free package. Standard components (Non Pb-Free) currently in production are RoHS 5 compliant. Standard components may contain Pb, but do not contain the other 5 substances (above allowable levels).

ASSEMBLY Site 1 – Package Qualification Report #s 044501, 021801, 021113 (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 are listed in section 1A. Materials from this list may be contained or intentionally added to this product, as it is not considered Pb-Free or RoHS compliant.

Substances / Compounds	Weight by mg	PPM	Analysis Report (Note 2)
Cadmium and Cadmium Compounds	0	< 5.0	As per MSDS
Hexavalent Chromium and its Compounds	0	< 5.0	
Lead and Lead Compounds	81.8200	61,800	
Mercury and Mercury Compounds	0	< 5.0	
Polybrominated Biphenyls (PBB)	0	< 5.0	
Polybrominated Diphenylethers (PBDE)	0	< 5.0	
Asbestos	0	0	
Azo colorants	0	0	
Ozone Depleting Substances	0	0	
Polychlorinated Biphenyls (PCBs)	0	0	
Polychlorinated Naphthalenes	0	0	
Radioactive Substances	0	0	
Shortchain Chlorinated Paraffins	0	0	
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	0	0	
Tributyl Tin Oxide (TBTO)	0	0	
Formaldehyde	0	0	

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" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site 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 homogeneous material	PPM	% Weight of substance per package
Substrate	Base Material	SiO ₂	60676-86-0	41.7100	11.0100%	31,500	3.1500%
		Acrylic	29690-82-2	37.8700	9.9900%	28,600	2.8600%
		Epoxy	68541-56-0	30.3200	8.0000%	22,900	2.2900%
		Bisphenol	13676-54-5	56.8000	14.9900%	42,900	4.2900%
		Triazol	25722-66-1	66.3300	17.5000%	50,100	5.0100%
		Cu	7440-50-8	137.8300	36.3700%	104,100	10.4100%
		Ni	7440-02-0	5.6900	1.5000%	4,300	0.4300%
		Au	7440-57-5	2.1200	0.5600%	1,600	0.1600%
		Br	7726-95-6	0.2600	0.0700%	200	0.0200%
Solder Ball	External Plating	Sn	7440-31-5	139.4200	63.0200%	105,300	10.5300%
		Pb	7439-92-1	81.8200	36.9800%	61,800	6.1800%
Die Attach	Adhesive	Fused Silica	60676-86-0	71.1000	47.4800%	53,700	5.3700%
		Diester	-----	36.1500	24.1400%	27,300	2.7300%
		Epoxy Resin	-----	7.2800	4.8600%	5,500	0.5500%
		Functionalized esters	-----	13.1100	8.7500%	9,900	0.9900%
		Polymeric Resin	-----	3.9700	2.6500%	3,000	0.3000%
		Filler	9002-84-0	7.8100	5.2200%	5,900	0.5900%
		Bismaleimide	-----	6.3600	4.2500%	4,800	0.4800%
		Methacrylates	-----	2.6500	1.7700%	2,000	0.2000%
		Divinyl Ether	-----	0.9300	0.6200%	700	0.0700%
		Polymer	-----	0.4000	0.2700%	300	0.0300%
Die	Circuit	Si	7440-21-3	71.2300	100.0000%	53,800	5.3800%
Wire	Interconnect	Au	7440-57-5	5.0300	100.0000%	3,800	0.3800%
Mold Compound	Encapsulation	Silica Fused	60676-86-0	443.0100	88.9900%	334,600	33.4600%
		Epoxy Resin	-----	27.4100	5.5100%	20,700	2.0700%
		Phenol Resin	-----	27.4100	5.5100%	20,700	2.0700%

Package Weight (mg): **1,324.0200**

% Total: **100**

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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
Tube	Plastic Tube	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	End Plug	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	End Pin	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
	Desiccant	< 10.0	< 2.0	< 2.0	< 1.0	< 3.0	< 3.0	CoA-DESS-R
	Bubble Pack	< 2.0	< 2.0	< 2.0	< 2.0	< 100.0	< 90.0	CoA-BUBP-R

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Document History Page

Document Title: 119-FBGA 14X22mm Non Pb-Free PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)
Document Number: 001-05123

Rev.	ECN No.	Orig. of Change	Description of Change
**	400429	GFJ	New document
*A	2566360	MAHA	1. Updated Cypress logo. 2. Added percent weight per homogeneous material and weight of substance in the material composition table. 3. Updated and added Lead, Cr+VI, PBB and PBDE on the Declaration of Packaging/Indirect Materials. DCon: Replaced from CML to WEB in the distribution list.
*B	2753787	MAHA	Corrected the CAS number of gold on the material composition table of assembly site 1. Added the CAS number of bromine to the material composition table of assembly site 1.
*C	3340238	MAHA	Revised the package weight on page 1. Added the weight of Lead on Table A. Expressed the weight, % Weight of Substance per Homogeneous Material, and % Weight of Substance per Package in four decimal places on Table B.

Distribution: WEB

Posting: None

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