119 - BGA (14 x 22 mm)
PB-Free Package

PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	BW	**Body Size (mil/mm)**	14 x 22 mm
Package Weight – Site 1	1,310.0100 mg	**Package Weight – Site 2**	N/A

SUMMARY

The 119- BGA 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: Advanced Semiconductor Engineering Taiwan (ASET)
Package Qualification Report #s 044005/ 043301 (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-BW119-ASET
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 Napthalenes	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	SiO2	60676-86-0	41.6735	11.0000%	31,812	3.1812%
		Acrylic	29690-82-2	37.8471	9.9900%	28,891	2.8891%
		Epoxy	68541-56-0	30.2701	7.9900%	23,107	2.3107%
		Bisphenol	13676-54-5	56.8654	15.0100%	43,408	4.3408%
		Triazol	25722-66-1	66.2988	17.5000%	50,609	5.0609%
		Cu	7440-50-8	137.9393	36.4100%	105,296	10.5296%
		Ni	7440-02-0	5.6449	1.4900%	4,309	0.4309%
		Au	7440-57-5	2.0837	0.5500%	1,591	0.1591%
		Br	Trade Secret	0.2273	0.0600%	174	0.0174%
Solder Ball	External Plating	Sn	7440-31-5	193.7886	95.5000%	147,929	14.7929%
		Ag	7440-22-4	8.1168	4.0000%	6,196	0.6196%
		Cu	7440-50-8	1.0146	0.5000%	774	0.0774%
Die Attach	Adhesive	Silica Fused	60676860	71.1265	47.5000%	54,295	5.4295%
		Diester	Trade Secret	36.1622	24.1500%	27,605	2.7605%
		Epoxy Resin	Trade Secret	7.2175	4.8200%	5,509	0.5509%
		Functionalized Esters	Trade Secret	13.2370	8.8400%	10,105	1.0105%
		Polymetric Resin	Trade Secret	3.9232	2.6200%	2,995	0.2995%
		Filler	9002-84-0	7.7266	5.1600%	5,898	0.5898%
		Bismaleimide	Trade Secret	6.2891	4.2000%	4,801	0.4801%
		Methacrylates	Trade Secret	2.7552	1.8400%	2,103	0.2103%
		Divinyl ether	Trade Secret	0.9134	0.6100%	697	0.0697%
		Polymer	Trade Secret	0.3893	0.2600%	297	0.0297%
Die	Circuit	Si	7440-21-3	75.5900	100.0000%	57,702	5.7702%
Wire	Interconnect	Au	7440-57-5	4.9800	100.0000%	3,801	0.3801%
Mold Compound	Encapsulation	Silica Fused	60676860	443.1577	89.0000%	338,286	33.8286%
		Epoxy Resin	Trade Secret	27.3861	5.5000%	20,905	2.0905%
		Phenolic Resin	Trade Secret	27.3861	5.5000%	20,905	2.0905%

Package Weight (mg): 1,310.0100 **% Total: 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	< 50.00	< 45.00	CoA-COVT-R
	Carrier tape	< 2.0	< 2.0	< 2.0	< 2.0	< 50.00	< 45.00	CoA-CART-R
	Plastic Reel	< 5.0	< 5.0	< 5.0	< 10.0	<50.0	<45.0	CoA-PLRL-R
Tray	Tray	< 2.0	< 2.0	< 2.0	< 2.0	< 0.0005	< 0.0005	CoA-TRAY-R
Others	Moisture Barrier Bag	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	CoA-MBBG –R

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Document History Page

Document Title: 119 - BGA (14 X 22 MM) PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
Document Number: 001-04982

Rev.	ECN No.	Orig. of Change	Description of Change
**	398450	GFJ	New Specification
*A	1732984	DPT/HLR DCon	Added Assembly Site 2 – Package Qualification Report # 073702. Changed cypress Logo Added % weight of substance per Homogenous Material and % weight of substance per package on the Material Composition for Assembly Site 1. Completed the RoHS Substances namely; Lead Cadmium, Mercury, Chromium VI, PBB and PBDE on Declaration of Packaging Indirect Materials table for Assembly Site 1. Replaced CML with WEB in the distribution
*B	2768585	VFR	Deleted Material Declaration for Site 2 and transferred to Spec # 001-05023.
*C	3083879	JARG Dcon	Corrected CAS number for Gold (Au) and Silver (Ag) on Material Composition Table. Changed CML to WEB in distribution.
*D	3445871	JARG	Updated Material Composition Table for Assembly Site 1 to reflect 4 decimal places on values.
*E	4031214	YUM	Added assembly site name in the assembly heading. Changed Assembly code to Assembly Site Name. Removed entire Tube row in the Indirect Materials Section.
*F	4586251	MRB	No Change
*G	5081480	MRB DCON	Changed CAS # from "-----------" to Trade Secret Removed Distribution: WEB and Posting: None in the document history page.

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