



**256 - BGA (27 x 27 mm)
Pb-Free Package**

PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	BJ	Body Size (mil/mm)	27 x 27 mm
Package Weight – Site 1	4,001 mg	Package Weight – Site 2	N/A

SUMMARY

The 256- 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 – Package Qualification Report #s 044507 (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-BJ256-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 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.



**256 - BGA (27 x 27 mm)
Pb-Free Package**

B. MATERIAL COMPOSITION (Note 3)

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	PPM	%
Substrate	Base Material	HS Cu	7440-50-8	2448.21	611,900	61.19%
		HS Ni	7440-02-0	24.01	6,000	0.60%
		SM Epoxy	29690-82-2	62.42	15,600	1.56%
		Epoxy Resin	-----	383.30	95,800	9.58%
		Glass	25722-66-1	196.85	49,200	4.92%
		Cu	7440-50-8	338.48	84,600	8.46%
		Ni	7440-02-0	3.60	900	0.09%
		Au	749-90-5	0.40	100	0.01%
Solder Ball	External Plating	Sn	7440-31-5	254.46	63,600	6.36%
		Ag	7440-22-4	27.21	6,800	0.68%
		Cu	7440-50-8	3.60	900	0.09%
Die Attach	Adhesive	Ag	7440-22-4	6.40	1,600	0.16%
		Bismaleimide	-----	0.80	200	0.02%
		Methacrylate	-----	0.80	200	0.02%
		Acrylate	-----	0.40	100	0.01%
		Polymer	-----	0.40	100	0.01%
Die	Circuit	Si	7440-21-3	58.01	14,500	1.45%
Wire	Interconnect	Au	7429-90-5	8.00	2,000	0.20%
Mold Compound	Encapsulation	Silica Fused	60676-86-0	136.03	34,000	3.40%
		Epoxy Resin	-----	28.41	7,100	0.71%
		Anhydride	25550-51-0	18.40	4,600	0.46%
		Carbon Black	1333-86-4	0.40	100	0.01%
		Additives	-----	0.40	100	0.01%

Package Weight (mg): 4,001 **% Total:** 100

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.



II. DECLARATION OF PACKAGING / INDIRECT MATERIALS

Type	Material	Cadmium PPM	Mercury PPM	Analysis Report (Note2)
Tape & Reel	Cover tape	< 5.0	< 5.0	CoA-COVT-G CoA-COVT-R
	Carrier tape	< 5.0	< 5.0	CoA-CART-G CoA-CART-R
	Plastic Reel	< 5.0	< 5.0	CoA-PLRL-G CoA-PLRL-R
Tray	Tray	< 5.0	< 5.0	CoA-TRAY-G CoA-TRAY-R
Tube	Plastic Tube	N/A	N/A	N/A
	End Plug	N/A	N/A	N/A
Others	Moisture Barrier bag	< 5.0	< 5.0	CoA-MBBG-G CoA-MBBG-R
	Shielding bag	< 5.0	< 5.0	CoA-SBAG-G CoA-SBAG-R
	Protective Band	< 5.0	< 5.0	CoA-PROB- R
	Shipping and inner/ pizza box	< 5.0	< 5.0	CoA-ABOX-R
	Desiccant	< 5.0	< 5.0	CoA-DESS-G CoA-DESS-R
	Bubble Pack	< 5.0	< 5.0	CoA- BUBP-G CoA-BUBP-R

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.



256 - BGA (27 x 27 mm)
Pb-Free Package

Document History Page

Document Title: 356-BGA 27X27mm Pb-Free PMDD
Document Number: 001-04983

Rev.	ECN No.	Orig. of Change	Description of Change
**	399136	GFJ	New document

Distribution: E-CML

Posting: None

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.