

PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)

Cypress Package Code	BK	Body Size (mil/mm)	8 x 20 mm
Package Weight – Site 1	424 mg	Package Weight – Site 2	N/A

SUMMARY

The 48 - 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 # 054007 (See 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-BK48-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” 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 Homogenous material	PPM	% weight of substance per package
Substrate	Base Material	SiO ₂	60676-86-0	14.48	11.00	34,169	3.42
		Acrylic	Proprietary, 29690-82-2	13.17	10.00	31,078	3.11
		Epoxy	68541-56-0, 25068-38-6	10.53	8.00	24,848	2.48
		Bisphenol	13676-54-5	19.75	15.00	46,605	4.66
		Triazol	25722-66-1	23.04	17.50	54,369	5.44
		Cu	7440-50-8	47.94	36.41	113,132	11.31
		Ni	7440-02-0	1.98	1.50	4,672	0.47
		Au	7440-57-5	0.72	0.55	1,699	0.17
		Br	7726-95-6	0.07	0.05	171	0.02
Solder Ball	External Plating	Sn	7440-31-5	4.80	95.50	11,327	1.13
		Ag	7440-22-4	0.20	4.00	472	0.05
		Cu	7440-50-8	0.03	0.50	71	0.01
Die Attach	Adhesive	Fused silica	60676-86-0	35.44	54.00	83,630	8.36
		Diester	Proprietary	18.05	27.50	42,594	4.26
		Epoxy Resin	Proprietary	3.61	5.50	8,519	0.85
		Functionalized esters	Proprietary	6.56	10.00	15,480	1.55
		Polymeric resin	Proprietary	1.97	3.00	4,649	0.46
Die	Circuit	Si	7440-21-3	60.03	100.00	141,665	14.17
Wire	Interconnect	Au	7440-57-5	1.97	100.00	4,644	0.46
Mold Compound	Encapsulation	Silica (fused)	60676-86-0	141.89	89.00	334,822	33.48
		Epoxy resin	Proprietary	8.77	5.50	20,691	2.07
		Phenolic resin	Proprietary	8.77	5.50	20,691	2.07

Package Weight (mg): **424**

% Total: **100**

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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	<5.0	<5.0	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	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-ABOX-R
	Dessicant	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-DESS-R
	Bubble Pack	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	CoA-BUBP-R

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Document History Page

Document Title: 48 - FBGA 8X20MM PB-FREE PACKAGE MATERIAL DECLARATION (PMDD)
Document Number: 001-05738

Rev.	ECN No.	Orig. of Change	Description of Change
**	409840	YXP	New specification.
*A	2519848	HLR DCon	Changed Cypress Logo Removed Ion impurities on Bonding Wire 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. Replaced CML with WEB in distribution list.
*B	2712140	HLR	Updated CAS Number of Gold and Bromine.
*C	3298119	HLR	Removed tube material on Declaration of Packaging/Indirect Material.

Distribution: WEB

Posting: None

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