

PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)

Cypress Package Code	VZ	Body Size (mil/mm)	400 mils
Package Weight – Site 1	B1 : 1,809.9600 mg B2 : 1,773.3199 mg	Package Weight – Site 2	1,773.3199 mg

SUMMARY

The 44L-SOJ Pb-Free package is compliant to RoHS. Cypress Ordering Part Number containing an “X” (e.g. CY7C1328G-133AXI, CY2308SXC-1HT) meet the of Directive 2002/95/EC (RoHS) requirement.

ASSEMBLY Site 1 – Package Qualification Report # 040803 / 063104 (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-VZ44-R CoA-VZ44-R1
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)

B1: NiPdAu with Standard Molding Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	%Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	330.1017	95.3500%	182,381	18.2381 %
		Fe	7439-89-6	3.4620	1.0000%	1,913	0.1913%
		P	7723-14-0	2.2503	0.6500%	1,243	0.1243%
		Zn	7440-66-6	10.3860	3.0000%	5,738	0.5738%
Lead Finish	External Plating	Ni	7440-02-0	0.1930	96.5200%	107	0.0107%
		Pd	7440-05-3	0.0035	1.7400%	2	0.0002%
		Au	7440-57-5	0.0035	1.7400%	2	0.0002%
Die Attach	Adhesive	Ag	7440-22-4	0.4800	80.0000%	265	0.0265%
		Proprietary Bismaleimide	-----	0.0500	8.3300%	28	0.0028%
		Proprietary Polymer	-----	0.0400	6.6700%	22	0.0022%
		Methacrylate	-----	0.0100	1.6700%	6	0.0006%
		Acrylate ester	-----	0.0100	1.6700%	6	0.0006%
		Organic peroxide	-----	0.0100	1.6700%	6	0.0006%
Die	Circuit	Si	7440-21-3	8.4400	100.0000%	4,663	0.4663%
Wire	Interconnect	Au	7440-57-5	1.4100	100.0000%	779	0.0779%
Mold Compound	Encapsulation	Solid Epoxy Resin	-----	116.2488	8.0000%	64,227	6.4227%
		Phenol Resin	-----	116.2488	8.0000%	64,227	6.4227%
		Antimony Trioxide	1309-64-4	14.5311	1.0000%	8,028	0.8028%
		Carbon Black	1333-86-4	14.5311	1.0000%	8,028	0.8028%
		Fused Silica	60676-86-0	1162.4880	80.0000%	642,273	64.2273 %
		Crystalline Silica	14808-60-7	29.0622	2.0000%	16,057	1.6057%

Package Weight (mg): **1,809.9600**

% Total: **100.0000**

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B2 : NiPdAu with Green Molding Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	%Weight of Substance per package
Leadframe	Based Material	Cu	7440-50-8	428.1072	97.4100%	241,416	24.1416%
		Fe	7439-89-6	10.5478	2.4000%	5,948	0.5948%
		P	7723-14-0	0.3076	0.0700%	173	0.0173%
		Zn	7440-66-6	0.5274	0.1200%	297	0.0297%
Lead Finish	External Plating	Ni	7440-02-0	3.3010	96.5200%	1,861	0.1861%
		Pd	7440-05-3	0.0595	1.7400%	34	0.0034%
		Au	7440-57-5	0.0595	1.7400%	34	0.0034%
Die Attach	Adhesive	Ag	7440-22-4	1.6501	80.1000%	930	0.0930%
		Bismaleimide	-----	0.1899	9.2200%	107	0.0107%
		Polymer	-----	0.0999	4.8500%	56	0.0056%
		Methacrylate	-----	0.0400	1.9400%	23	0.0023%
		Acylate ester	-----	0.0400	1.9400%	23	0.0023%
		Organic Peroxide	-----	0.0400	1.9400%	23	0.0023%
Die	Circuit	Si	7440-21-3	28.8800	100.0000%	16,286	1.6286%
Wire	Interconnect	Au	7440-57-5	1.7100	100.0000%	964	0.0964%
Mold Compound	Encapsulation	Silica	60676-86-0	1155.0064	89.0000%	651,324	65.1324%
		Epoxy Resin	-----	77.8656	6.0000%	43,910	4.3910%
		Phenol Resin	-----	64.8880	5.0000%	36,591	3.6591%

Package Weight (mg): **1,773.3199**

% Total: **100.0000**

II. DECLARATION OF PACKAGING INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tube	Plastic Tube	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-PLTB-R
	End Plug	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-EPLG-R
Tape and Reel	Carrier Tape	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CART-R
Others	Moisture Barrier Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-MBBG-R
	Dessicant	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-DESS-R
	HIC	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-HIC-R
	Bubble Pack	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	CoA-BUBB-R
	Carton Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CRTN-R
	Inner Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-LBL-R
	Shielding Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-SBAG-R

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

ASSEMBLY Site 2 – Package Qualification Report # 110907 (Note 1)

I. DECLARATION OF PACKAGED UNITS

B. 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-VZ44-JT
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

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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	PPM	%Weight of Substance per package
Leadframe	Based Material	Cu	7440-50-8	428.1072	97.4100%	241,416	24.1416%
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		P	7723-14-0	0.3076	0.0700%	173	0.0173%
		Zn	7440-66-6	0.5274	0.1200%	297	0.0297%
Lead Finish	External Plating	Ni	7440-02-0	3.3010	96.5200%	1,861	0.1861%
		Pd	7440-05-3	0.0595	1.7400%	34	0.0034%
		Au	7440-57-5	0.0595	1.7400%	34	0.0034%
Die Attach	Adhesive	Ag	7440-22-4	1.6501	80.1000%	930	0.0930%
		Bismaleimide	-----	0.1899	9.2200%	107	0.0107%
		Polymer	-----	0.0999	4.8500%	56	0.0056%
		Methacrylate	-----	0.0400	1.9400%	23	0.0023%
		Acylate ester	-----	0.0400	1.9400%	23	0.0023%
		Organic Peroxide	-----	0.0400	1.9400%	23	0.0023%
Die	Circuit	Si	7440-21-3	28.8800	100.0000%	16,286	1.6286%
Wire	Interconnect	Au	7440-57-5	1.7100	100.0000%	964	0.0964%
Mold Compound	Encapsulation	Silica	60676-86-0	1155.0064	89.0000%	651,324	65.1324%
		Epoxy Resin	-----	77.8656	6.0000%	43,910	4.3910%
		Phenol Resin	-----	64.8880	5.0000%	36,591	3.6591%

Package Weight (mg): **1,773.3199**

% Total: **100.0000**

II. DECLARATION OF PACKAGING INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tube	Plastic Tube	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-PLTB-R
	End Plug	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-EPLG-R
Tape and Reel	Carrier Tape	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CART-R
Others	Moisture Barrier Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-MBBG-R
	Dessicant	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-DESS-R
	HIC	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-HIC-R
	Bubble Pack	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	CoA-BUBB-R
	Carton Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CRTN-R
	Inner Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-LBL-R
	Shielding Bag	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	CoA-SBAG-R

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

Document History Page

Document Title: 44L-SOJ PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)
Document Number: 001-03015

Rev.	ECN No.	Orig. of Change	Description of Change
**	385301	EML	New document
*A	508204	ERI	Added : 1. Add B2 : 1,773 mg 2. Add QTP Reference 063104 3. B1 : NiPdAu with Standard Molding Compound 4. B2 : NiPdAu with Green Molding Compound
*B	521980	HLR	Change the Total Package Weight of NiPdAu with Standard Molding Compound on the Material Composition Table
*C	1521704	MRB	1. Added on the material composition the percent weight per homogeneous material and weight of substance 2. Updated and added Lead, Cr+VI, PBB and PBDE on the Declaration of Packaging/Indirect Materials. 3. Added note 4: the package were based on Engineering calculation and performed on a package family basis
*D	3218998	REYD Dcon	Added Assembly Site 2 – JCET Change WEB to CML in distribution list.
*E	3422772	HLR	Updated the material composition table for Assembly Sites 1 and 2 to reflect 4 decimal places on values.

Distribution: WEB

Posting: None

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