



PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	VZ	Body Size (mil/mm)	300 mils
Package Weight – Site 1	890 mg	Package Weight – Site 2	858 mg
Package Weight – Site 3	858 mg		

SUMMARY

The 28L-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 # 030802 (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-VZ28-R
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 Homogeneous	PPM	%Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	233.08	95.35	261,891	26.19%
		Fe	7439-89-6	2.44	1.00	2,747	0.27%
		P	7723-14-0	1.59	0.65	1,785	0.18%
		Zn	7440-66-6	7.33	3.00	8,240	0.82%
Lead Finish	External Plating	Ni	7440-02-0	0.19	96.52	211	0.02%
		Pd	7440-05-3	0.00	1.74	11	0.00%
		Au	7440-57-5	0.00	1.74	3	0.00%
Die Attach	Adhesive	Ag	7440-22-4	0.47	79.66	533	0.05%
		Proprietary bismaleimide	-----	0.05	8.47	54	0.01%
		Proprietary polymer	-----	0.04	6.78	47	0.00%
		Methacrylate	-----	0.01	1.69	13	0.00%
		Acrylate ester	-----	0.01	1.69	13	0.00%
		Organic peroxide	-----	0.01	1.69	13	0.00%
Die	Circuit	Si	7440-21-3	8.80	100.00	9,888	0.99%
Wire	Interconnect	Au	7440-57-5	0.96	100.00	1,080	0.11%
Mold Compound	Encapsulation	Solid Epoxy Resin	-----	50.80	8.00	57,079	5.71%
		Phenol Resin	-----	50.80	8.00	57,079	5.71%
		Antimony Trioxide	1309-64-4	6.35	1.00	7,135	0.71%
		Carbon Black	1333-86-4	6.35	1.00	7,135	0.71%
		Fused Silica	60676-86-0	508.00	80.00	570,787	57.08%
		Crystalline Silica	14808-60-7	12.70	2.00	14,270	1.43%

Package Weight (mg): **890**

% Total: **100**

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 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

ASSEMBLY Site 2 – Package Qualification Report # 054502 (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-VZ28-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 Naphthalenes	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 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 Homogeneous	PPM	%Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	291.53	97.41	339,775	33.98
		Fe	7439-89-6	7.18	2.40	8,371	0.84
		P	7723-14-0	0.21	0.07	244	0.02
		Zn	7440-66-6	0.36	0.12	419	0.04
Lead Finish	External Plating	Ni	7440-02-0	3.59	96.52	4187	0.42
		Pd	7440-05-3	0.06	1.74	75	0.01
		Au	7440-57-5	0.06	1.74	75	0.01
Die Attach	Adhesive	Ag	7440-22-4	0.14	80.00	158	0.02
		Proprietary bismaleimide	-----	0.02	9.00	18	0.00
		Proprietary polymer	-----	0.01	5.00	10	0.00
		Methacrylate	-----	0.00	2.00	4	0.00
		Acrylate ester	-----	0.00	2.00	4	0.00
		Organic peroxide	-----	0.00	2.00	4	0.00
Die	Circuit	Si	7440-21-3	2.38	100.00	2,771	0.28
Wire	Interconnect	Au	7440-57-5	1.59	100.00	1,858	0.19
Mold Compound	Encapsulation	Fused Silica	60676-86-0	490.26	89.00	571,403	57.14
		Phenol Resin	-----	27.54	5.00	32,101	3.21
		Epoxy Resin	-----	33.05	6.00	38,522	3.85

Package Weight (mg): **858**
% Total: **100**
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 3 – Package Qualification Report # 104811/ 104812 (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-VZ28-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	Base Material	Cu	7440-50-8	291.53	97.41	339,775	33.98
		Fe	7439-89-6	7.18	2.40	8,371	0.84
		P	7723-14-0	0.21	0.07	244	0.02
		Zn	7440-66-6	0.36	0.12	419	0.04
Lead Finish	External Plating	Ni	7440-02-0	3.59	96.52	4187	0.42
		Pd	7440-05-3	0.06	1.74	75	0.01
		Au	7440-57-5	0.06	1.74	75	0.01
Die Attach	Adhesive	Ag	7440-22-4	0.14	80.00	158	0.02
		Proprietary bismaleimide	-----	0.02	9.00	18	0.00
		Proprietary polymer	-----	0.01	5.00	10	0.00
		Methacrylate	-----	0.00	2.00	4	0.00
		Acrylate ester	-----	0.00	2.00	4	0.00
		Organic peroxide	-----	0.00	2.00	4	0.00
Die	Circuit	Si	7440-21-3	2.38	100.00	2,771	0.28
Wire	Interconnect	Au	7440-57-5	1.59	100.00	1,858	0.19
Mold Compound	Encapsulation	Fused Silica	60676-86-0	490.26	89.00	571,403	57.14
		Phenol Resin	-----	27.54	5.00	32,101	3.21
		Epoxy Resin	-----	33.05	6.00	38,522	3.85

Package Weight (mg): 858
% Total: 100
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: 28L-SOJ PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)
Document Number: 001-03012

Rev.	ECN No.	Orig. of Change	Description of Change
**	385301	EML	New document
*A	1178023	MRB	1. Updated Cypress Logo 2. Added on the material composition the percent weight per homogeneous material and weight of substance 3. Updated and added Lead, Cr+VI, PBB and PBDE on the Declaration of Packaging/Indirect Materials. Added note 4: the package were based on Engineering calculation and performed on a package family basis 4. Change the value of Pd on leadframe
*B	2712133	HLR	Added Assembly Site 2. QTP No. 054502 Replaced CML with WEB
*C	2737817	MAHA	Corrected the CAS number of Proprietary bismaleimide for assembly sites 1 and 2.
*D	2763952	MAHA	Corrected the CAS number of carbon black for assembly site 1.
*E	3167760	REYD	Added Assembly Site 3 – JCET.
*F	3298123	HLR	Sunset Due – No Change

Distribution: WEB

Posting: None

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