PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	VZ	**Body Size (mil/mm)**	300 mils
Package Weight – Site 1	B1: 1,209.7800 mg B2: 1,434.5800 mg	**Package Weight – Site 2**	1,434.5800 mg

SUMMARY

The 32L-SOJ Pb-Free package is compliant to RoHS. Cypress Ordering Part Number containing an "X" (e.g. CY7C1328G-133A**X**I, CY2308S**X**C-1HT) meet the of Directive 2002/95/EC (RoHS) requirement.

ASSEMBLY Site 1: Cypress Manufacturing Limited (CML)
Package Qualification Report # 040803, 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-VZ32- CML
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)

B1. NiPdAu with Standard Mold Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogenous material	PPM	% weight of substance per package
Leadframe	Base Material	Cu	7440-50-8	232.8447	95.3500%	192,469	19.2469%
		Fe	7439-89-6	2.4420	1.0000%	2,019	0.2019%
		P	7723-14-0	1.5873	0.6500%	1,312	0.1312%
		Zn	7440-66-6	7.3260	3.0000%	6,056	0.6056%
Lead Finish	External Plating	Ni	7440-02-0	0.1930	96.5200%	160	0.0160%
		Pd	7440-05-3	0.0035	1.7400%	3	0.0003%
		Au	7440-57-5	0.0035	1.7400%	3	0.0003%
Die Attach	Adhesive	Ag	7440-22-4	0.2400	77.4200%	198	0.0198%
		Proprietary bismaleimide	----------------	0.0200	6.4500%	17	0.0017%
		Proprietary polymer	----------------	0.0200	6.4500%	17	0.0017%
		Methacrylate	----------------	0.0100	3.2300%	8	0.0008%
		Acrylate ester	----------------	0.0100	3.2300%	8	0.0008%
		Organic peroxide	----------------	0.0100	3.2300%	8	0.0008%
Die	Circuit	Si	7440-21-3	0.9600	100.0000%	794	0.0794%
Wire	Interconnect	Au	7440-57-5	4.6000	100.0000%	3,802	0.3802%
Mold Compound	Encapsulation	Solid Epoxy Resin	----------------	76.7608	8.0000%	63,450	6.3450%
		Phenol Resin	----------------	76.7608	8.0000%	63,450	6.3450%
		Antimony Trioxide	1309-64-4	9.5951	1.0000%	7,931	0.7931%
		Carbon Black	1333-86-4	9.5951	1.0000%	7,931	0.7931%
		Fused Silica	60676-86-0	767.6080	80.0000%	634,502	63.4502%
		Crystalline Silica	14808-60-7	19.1902	2.0000%	15,863	1.5863%
			Package Weight (mg):	**1,209.7800**		**% Total:**	**100.0000**

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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.

B2. NiPdAu with Green Mold Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogenous material	PPM	% weight of substance per package
Leadframe	Base Material	Cu	7440-50-8	329.7231	97.4100%	229,839	22.9839%
		Fe	7439-89-6	8.1238	2.4000%	5,663	0.5663%
		P	7723-14-0	0.2369	0.0700%	165	0.0165%
		Zn	7440-66-6	0.4062	0.1200%	283	0.0283%
Lead Finish	External Plating	Ni	7440-02-0	4.0538	96.5200%	2,826	0.2826%
		Pd	7440-05-3	0.0731	1.7400%	51	0.0051%
		Au	7440-57-5	0.0731	1.7400%	51	0.0051%
Die Attach	Adhesive	Ag	7440-22-4	0.1360	80.0000%	95	0.0095%
		Proprietary bismaleimide	---------------	0.0153	9.0000%	11	0.0011%
		Proprietary polymer	---------------	0.0085	5.0000%	6	0.0006%
		Methacrylate	---------------	0.0034	2.0000%	2	0.0002%
		Acrylate ester	---------------	0.0034	2.0000%	2	0.0002%
		Organic peroxide	---------------	0.0034	2.0000%	2	0.0002%
Die	Circuit	Si	7440-21-3	2.3800	100.0000%	1,659	0.1659%
Wire	Interconnect	Au	7440-57-5	2.1400	100.0000%	1,492	0.1492%
Mold Compound	Encapsulation	SiO2	60676-86-0	967.6080	89.0000%	674,489	67.4489%
		Phenol Resin	---------------	54.3600	5.0000%	37,893	3.7893%
		Epoxy Resin	---------------	65.2320	6.0000%	45,471	4.5471%
			Package Weight (mg):	**1,434.5800**		**% 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)
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	< 5.0	< 5.0	< 5.0	< 10.0	< 50.0	< 45.0	CoA-PLRL-R
Tube	Plastic Tube	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	CoA-PLTB-R
	End Plug	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	CoA-EPLG-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	< 10.0	< 4.0	< 4.0	< 5.0	---------	-----------	CoA-ABOX-R
	Dessicant	< 10.0	< 2.0	< 2.0	< 1.0	< 3.0	< 3.0	CoA-DESS-R
	Bubble Pack	< 2.0	< 2.0	< 2.0	< 2.0	< 100.0	< 90.0	CoA-BUBP-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: Jiangsu Changjiang Electronics Technology (JCET)
Package Qualification Report # 104811 (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-VZ32- JCET
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 Homogenous material	PPM	% weight of substance per package
Leadframe	Base Material	Cu	7440-50-8	329.7231	97.4100%	229,839	22.9839%
		Fe	7439-89-6	8.1238	2.4000%	5,663	0.5663%
		P	7723-14-0	0.2369	0.0700%	165	0.0165%
		Zn	7440-66-6	0.4062	0.1200%	283	0.0283%
Lead Finish	External Plating	Ni	7440-02-0	4.0538	96.5200%	2,826	0.2826%
		Pd	7440-05-3	0.0731	1.7400%	51	0.0051%
		Au	7440-57-5	0.0731	1.7400%	51	0.0051%
Die Attach	Adhesive	Ag	7440-22-4	0.1360	80.0000%	95	0.0095%
		Proprietary bismaleimide	----------------	0.0153	9.0000%	11	0.0011%
		Proprietary polymer	----------------	0.0085	5.0000%	6	0.0006%
		Methacrylate	----------------	0.0034	2.0000%	2	0.0002%
		Acrylate ester	----------------	0.0034	2.0000%	2	0.0002%
		Organic peroxide	----------------	0.0034	2.0000%	2	0.0002%
Die	Circuit	Si	7440-21-3	2.3800	100.0000%	1,659	0.1659%
Wire	Interconnect	Au	7440-57-5	2.1400	100.0000%	1,492	0.1492%
Mold Compound	Encapsulation	SiO2	60676-86-0	967.6080	89.0000%	674,489	67.4489%
		Phenol Resin	----------------	54.3600	5.0000%	37,893	3.7893%
		Epoxy Resin	----------------	65.2320	6.0000%	45,471	4.5471%
			Package Weight (mg):	**1,434.5800**		**% 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)
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	< 5.0	< 5.0	< 5.0	< 10.0	< 50.0	< 45.0	CoA-PLRL-R
Tube	Plastic Tube	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	CoA-PLTB-R
	End Plug	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	CoA-EPLG-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	< 10.0	< 4.0	< 4.0	< 5.0	---------	-----------	CoA-ABOX-R
	Dessicant	< 10.0	< 2.0	< 2.0	< 1.0	< 3.0	< 3.0	CoA-DESS-R
	Bubble Pack	< 2.0	< 2.0	< 2.0	< 2.0	< 100.0	< 90.0	CoA-BUBP-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: 32L-SOJ PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
Document Number: 001-03013

Rev.	ECN No.	Orig. of Change	Description of Change
**	385301	EML	New document
*A	1176605	HLR	Changed Cypress Logo Added % weight of substance per Homogenous Material and % weight of substance per package on the Material Composition. Completed the RoHS Substances namely; Lead Cadmium, Mercury, Chromium VI, PBB and PBDE on Declaration of Packaging Indirect Materials table. Changed the value of Pd on Leadfinish.
*B	2664946	MAHA	Added material composition table for green mold compound for assembly site 1. Added reference QTP 054502 to assembly site 1.
*C	3305135	HLR Dcon	Added Note 4 on Footer Section. Deleted Tray and End Pin on Declaration of Indirect Materials Section. Replaced CML with WEB in distribution list.
*D	3321883	JARG	Added Assembly Site 2
*E	3676963	HLR	Updated the material composition table of Assembly Site 1 and 2 to reflect 4 decimal places on values.
*F	4032168	YUM	Added Assembly site name in the Assembly heading in Assembly Site 1 and 2. Changed the Assembly Code to Assembly Site Name in Assembly site 1 and 2.

Distribution: WEB

Posting: None

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