

PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)

Cypress Package Code	VZ	Body Size (mil/mm)	400mils
Package Weight – Site 1	1253 mg	Package Weight – Site 2	1088

SUMMARY

The SOJ 28L (400 mils) 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 #063506 (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-VZ28-O
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

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
Leadframe	Base Material	Cu	7440-50-8	404.80	97.50%	323065	32.31%
		Fe	7439-89-6	9.42	2.27%	7518	0.75%
		Zn	7440-66-6	0.46	0.11%	367	0.04%
		P	7723-14-0	0.12	0.03%	96	0.01%
	Frame plating	Ag	7440-22-4	0.40	0.10%	319	0.03%
Lead Finish	External Plating	Sn	7440-02-0	14.00	100.%	11173	1.12%
Die Attach	Adhesive	Silver Flake	7440-22-4	0.30	75.%	239	0.02%
		Epoxy Resin	Proprietary	0.04	11.%	35	0.00%
		Amine	Proprietary	0.03	8.%	26	0.00%
		1,4-Butanedioldiglycidyl	2425-79-8	0.02	6.%	19	0.00%
Die	Circuit	Si	7440-21-3	8.20	100.%	6544	0.65%
Wire	Interconnect	Au	7440-57-5	0.50	100.%	399	0.04%
Mold Compound	Encapsulation	Silicon Fused	60676-86-0	722.46	88.70%	576677	57.67%
		Epoxy Resin	Trade Secret	32.58	4.%	26006	2.60%
		Epoxy Cresol Novolac	29690-82-2	16.29	2.%	13003	1.30%
		Phenol Resin	Trade Secret	40.73	5.%	32507	3.25%
		Carbon Black	1333-86-4	2.44	0.3%	1950	0.20%
Package Weight (mg):				1253	% 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)
Tape & Reel	Cover tape	< 5.0	< 5.0	< 5.0	< 5.0	< 10.0	< 10.0	CoA-COVT-R
		< 2.0	< 2.0	< 2.0	< 2.0	< 0.0005	< 0.0005	CoA-COVT-O
	Carrier tape	< 2.0	< 2.0	< 2.0	< 2.0	-	-	CoA-CART-R
		< 2.0	< 2.0	< 2.0	< 2.0	< 0.0005	< 0.0005	CoA-CART-O
	Plastic Reel	< 5.0	< 5.0	< 5.0	< 10.0	< 50.0	< 50.0	CoA-PLRL-R
Tray	Tray	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tube	Plastic Tube	< 20.0	< 5.0	< 5.0	< 5.0	-	-	CoA-PLTB-R
	End Plug	< 5.0	< 5.0	< 5.0	< 5.0	-	-	CoA-EPLG-R
	End Pin	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Others	Shielding bag	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	CoA-SBAG –R CoA-SBAG –O

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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 #100807 (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-VZ28-OP
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	287.45	96.40%	264326	26.43%
		Fe	7439-89-6	7.01	2.35%	6444	0.64%
		P	7723-14-0	0.25	0.08%	226	0.02%
		Zn	7440-66-6	0.37	0.13%	343	0.03%
		Pb	7439-92-1	0.03	0.01%	27	0.00%
		Ag	7440-22-4	3.09	1.04%	2841	0.28%
Lead Finish	External Plating	Sn	7440-02-0	15.40	100.00%	14161	1.42%
Die Attach	Adhesive	Acrylic Resin	-	0.20	8.50%	180	0.02%
		Polybutadiene derivative	-	0.13	5.50%	116	0.01%
		Butadiene copolymer	-	0.02	1.00%	21	0.00%
		Epoxy Resin	Proprietary	0.06	2.50%	53	0.01%
		Acrylate	-	0.13	5.50%	116	0.01%
		Peroxide	-	0.01	0.50%	11	0.00%
		Additive		0.02	1.00%	21	0.00%
		Silver (Metal Powder)	7440-22-4	1.74	75.50%	1597	0.16%
Die	Circuit	Si	7440-21-3	3.80	100.0%	3494	0.35%
Wire	Interconnect	Au	7440-57-5	6.70	100.0%	6161	0.62%
Mold Compound	Encapsulation	Epoxy Resin-1	Trade Secret	24.74	3.25%	22746	2.27%
		Epoxy Resin-2	Trade Secret	22.83	3.00%	20996	2.10%
		Phenol Resin	Trade Secret	34.25	4.50%	31494	3.15%
		Carbon Black	1333-86-4	1.52	0.20%	1400	0.14%
		Silicon Fused	60676-86-0	669.77	88.00%	615879	61.59%
		Impurities	-	7.99	1.05%	7349	0.73%
Package Weight (mg):				1088	% 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)
Tape & Reel	Cover tape	< 5.0	< 5.0	< 5.0	< 5.0	< 10.0	< 10.0	CoA-COVT-R
		< 2.0	< 2.0	< 2.0	< 2.0	< 0.0005	< 0.0005	CoA-COVT-O
	Carrier tape	< 2.0	< 2.0	< 2.0	< 2.0	-	-	CoA-CART-R
		< 2.0	< 2.0	< 2.0	< 2.0	< 0.0005	< 0.0005	CoA-CART-O
	Plastic Reel	< 5.0	< 5.0	< 5.0	< 10.0	< 50.0	< 50.0	CoA-PLRL-R
Tray	Tray	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tube	Plastic Tube	< 20.0	< 5.0	< 5.0	< 5.0	-	-	CoA-PLTB-R
	End Plug	< 5.0	< 5.0	< 5.0	< 5.0	-	-	CoA-EPLG-R
	End Pin	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Others	Shielding bag	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	CoA-SBAG –R CoA-SBAG –O

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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 (400 mils) Pb-Free Package PMDD
Document Number: 001-12477

Rev.	ECN No.	Orig. of Change	Description of Change
**	628416	XTA	Initial spec release.
*A	2905392	EBZ	Included additional assembly site OSE Philippines (OP)
*B	3122563	ZJL	Sunset Review - No change needed. Current spec was aligned on actual requirements.

Distribution: WEB

Posting: None

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