



PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	SZ	Body Size (mil/mm)	300 mils
Package Weight – Site 1	B1: 849.9801 mg B2: 850.0000 mg	Package Weight – Site 2	773.1200 mg
Package Weight – Site 3	B1: 850.0000 mg B2: 749.9996 mg B3: 837.0814 mg	Package Weight – Site 4	N/A

SUMMARY

The 28L- SOIC 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: Cypress Manufacturing Limited (CML)
Package Qualification Report # 030802, 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-SZ28-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 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
FormaldehydeN/A	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.



28L - SOIC Pb-Free Package

B1. MATERIAL COMPOSITION (Note 3)

NiPdAu Using 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	294.5289	97.4100%	346,513	34.6513%
		Fe	7439-89-6	7.2566	2.4000%	8,537	0.8537%
		P	7723-14-0	0.2117	0.0700%	249	0.0249%
		Zn	7440-66-6	0.3628	0.1200%	427	0.0427%
Lead Finish	External Plating	Ni	7440-02-0	0.1930	96.5200%	227	0.0227%
		Pd	7440-05-3	0.0035	1.7400%	4	0.0004%
		Au	7440-57-5	0.0035	1.7400%	4	0.0004%
Die Attach	Adhesive	Ag	7440-22-4	0.1680	84.0000%	198	0.0198%
		Bismaleimide	Trade Secret	0.0200	10.0000%	24	0.0024%
		Polymer	Trade Secret	0.0100	5.0000%	12	0.0012%
		Methacrylate	Trade Secret	0.0008	0.4000%	1	0.0001%
		Acrylate ester	Trade Secret	0.0008	0.4000%	1	0.0001%
		Organic Peroxide	Trade Secret	0.0004	0.2000%	0	0.0000%
Die	Circuit	Si	7440-21-3	3.0000	100.0000%	3,529	0.3529%
Wire	Interconnect	Au	7440-57-5	1.9000	100.0000%	2,235	0.2235%
Mold Compound	Encapsulation	Fused Silica	60676-86-0	400.7745	73.9000%	471,510	47.1510%
		Solid Epoxy Resin	Trade Secret	54.2320	10.0000%	63,804	6.3804%
		Phenol Resin	Trade Secret	59.6552	11.0000%	70,184	7.0184%
		Antimony Trioxide	1309-64-4	7.0502	1.3000%	8,295	0.8295%
		Crystalline Silica	99439-28-8	16.2696	3.0000%	19,141	1.9141%
		Carbon Black	1333-86-4	4.3386	0.8000%	5,104	0.5104%

Package Weight (mg): **849.9801**

% Total: **100.0000**

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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.



28L - SOIC Pb-Free Package

B2. MATERIAL COMPOSITION (Note 3)

NiPdAu Using 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	292.4888	97.4100	344,104	34.4104%
		Fe	7439-89-6	7.2064	2.4000	8,478	0.8478%
		P	7723-14-0	0.2102	0.0700	247	0.0247%
		Zn	7440-66-6	0.3603	0.1200	424	0.0424%
Lead Finish	External Plating	Ni	7440-02-0	3.6044	96.5204	4,240	0.4240%
		Pd	7440-05-3	0.0649	1.7370	76	0.0076%
		Au	7440-57-5	0.0651	1.7427	77	0.0077%
Die Attach	Adhesive	Ag	7440-22-4	0.3601	80.0000	424	0.0424%
		Bismaleimide	Trade Secret	0.0405	9.0000	48	0.0048%
		Polymer	Trade Secret	0.0225	5.0000	26	0.0026%
		Methacrylate	Trade Secret	0.0090	2.0000	11	0.0011%
		Acrylate ester	Trade Secret	0.0090	2.0000	11	0.0011%
		Organic Peroxide	Trade Secret	0.0090	2.0000	11	0.0011%
Die	Circuit	Si	7440-21-3	6.3013	100.0000	7,413	0.7413%
Wire	Interconnect	Au	7440-57-5	1.6667	100.0000	1,961	0.1961%
Mold Compound	Encapsulation	SiO2	60676-86-0	478.4478	89.0000	562,880	56.2880%
		Phenol Resin	Trade Secret	26.8791	5.0000	31,622	3.1622%
		Epoxy Resin	Trade Secret	32.2549	6.0000	37,947	3.7947%

Package Weight (mg): 850.0000

% 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	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<5.0	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 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: Amkor Technology Philippines (P1/P2)
Package Qualification Report #s 070802 (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-SZ28- Amkor Philippines (P1/P2)
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". 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.



28L - SOIC Pb-Free Package

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	197.3693	97.5000%	255,289	25.5289%
		Fe	7439-89-6	4.7571	2.3500%	6,153	0.6153%
		P	7723-14-0	0.0607	0.0300%	79	0.0079%
		Zn	7440-66-6	0.2429	0.1200%	314	0.0314%
	Internal Plating	Ag	7440-22-4	1.5000	100.0000%	1,940	0.1940%
Lead Finish	External Plating	Sn	7440-31-5	5.1700	100.0000%	6,687	0.6687%
Die Attach	Adhesive	Resin	Trade Secret	1.3041	21.0000%	1,687	0.1687%
		Ag	7440-22-0	4.3470	70.0000%	5,623	0.5623%
		Metal Oxide	Trade Secret	0.1863	3.0000%	241	0.0241%
		Amine	Trade Secret	0.1863	3.0000%	241	0.0241%
		Gamma Butyrolactone	96-48-0	0.1863	3.0000%	241	0.0241%
Die	Circuit	Si	7440-21-3	20.6100	100.0000%	26,658	2.6658%
Wire	Interconnect	Au	7440-57-5	1.1000	100.0000%	1,423	0.1423%
Mold Compound	Encapsulation	Multi-aromatic Resin	Trade Secret	40.2075	7.5000%	52,007	5.2007%
		SiO2 Filler	60676-86-0	461.0460	86.0000%	596,345	59.6345%
		Carbon Black	1333-86-4	2.6805	0.5000%	3,467	0.3467%
		Epoxy Cresol Novolac	29690-82-2	10.7220	2.0000%	13,868	1.3868%
		Phenol Resin	Trade Secret	21.4440	4.0000%	27,737	2.7737%

Package Weight (mg): **773.1200**

% 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.



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
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 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 3: Jiangsu Changjiang Electronics Technology (JCET)
Package Qualification Report # 113906, 113907, 130503, 143703 (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-SZ28- 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
FormaldehydeN/A	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.



B1. MATERIAL COMPOSITION USING GOLD WIRE (Note 3)

Using Kyocera 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	292.4888	97.4100	344,104	34.4104%
		Fe	7439-89-6	7.2064	2.4000	8,478	0.8478%
		P	7723-14-0	0.2102	0.0700	247	0.0247%
		Zn	7440-66-6	0.3603	0.1200	424	0.0424%
Lead Finish	External Plating	Ni	7440-02-0	3.6044	96.5204	4,240	0.4240%
		Pd	7440-05-3	0.0649	1.7370	76	0.0076%
		Au	7440-57-5	0.0651	1.7427	77	0.0077%
Die Attach	Adhesive	Ag	7440-22-4	0.3601	80.0000	424	0.0424%
		Bismaleimide	Trade Secret	0.0405	9.0000	48	0.0048%
		Polymer	Trade Secret	0.0225	5.0000	26	0.0026%
		Methacrylate	Trade Secret	0.0090	2.0000	11	0.0011%
		Acrylate ester	Trade Secret	0.0090	2.0000	11	0.0011%
		Organic Peroxide	Trade Secret	0.0090	2.0000	11	0.0011%
Die	Circuit	Si	7440-21-3	6.3013	100.0000	7,413	0.7413%
Wire	Interconnect	Au	7440-57-5	1.6667	100.0000	1,961	0.1961%
Mold Compound	Encapsulation	SiO2	60676-86-0	478.4478	89.0000	562,880	56.2880%
		Phenol Resin	Trade Secret	26.8791	5.0000	31,622	3.1622%
		Epoxy Resin	Trade Secret	32.2549	6.0000	37,947	3.7947%

Package Weight (mg): 850.0000

% Total: 100.0000

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.



B2. MATERIAL COMPOSITION USING GOLD WIRE (Note 3)

Using Sumitomo 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	288.6403	97.4100	384,854	38.4854%
		Fe	7439-89-6	7.1116	2.4000	9,482	0.9482%
		P	7723-14-0	0.2074	0.0700	277	0.0277%
		Zn	7440-66-6	0.3556	0.1200	474	0.0474%
Lead Finish	External Plating	Ni	7440-02-0	3.5569	96.5204	4,743	0.4743%
		Pd	7440-05-3	0.0640	1.7370	85	0.0085%
		Au	7440-57-5	0.0642	1.7427	86	0.0086%
Die Attach	Adhesive	Ag	7440-22-4	0.1453	86.8000	194	0.0194%
		Allyl Compound	Trade Secret	0.0067	4.0000	9	0.0009%
		Epoxy Resin A	9003-36-5	0.0025	1.5000	3	0.0003%
		Epoxy Resin B	Trade Secret	0.0033	2.0000	4	0.0004%
		Diluent A	Trade Secret	0.0025	1.5000	3	0.0003%
		Diluent B	Trade Secret	0.0033	2.0000	4	0.0004%
		Hardener	Trade Secret	0.0033	2.0000	4	0.0004%
		Dicyandiamide	461-58-5	0.0002	0.1000	1	0.0000%
Die	Circuit	Si	7440-21-3	2.3434	100.0000	3,125	0.3125%
		Wire	Interconnect	Au	7440-57-5	3.3131	100.0000
Mold Compound	Encapsulation	SiO2	60676-86-0	398.6478	89.7500	531,530	53.1530%
		Epoxy Resin A	Trade Secret	11.1044	2.5000	14,806	1.4806%
		Epoxy Resin B	Trade Secret	11.1044	2.5000	14,806	1.4806%
		Phenol Resin	Trade Secret	22.2088	5.0000	29,612	2.9612%
		Carbon Black	1333-86-4	1.1104	0.2500	1,481	0.1481%

Package Weight (mg): 749.9996

% Total: 100.0000

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.



B3. USING COPPER PALLADIUM WIRE

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	Nickel	7440-02-0	6.5340	0.0220	7,806	0.7806%
		Silicon	7440-21-3	1.3365	0.0045	1,597	0.1597%
		Magnesium	7439-95-4	0.4455	0.0015	532	0.0532%
		Silver	7440-22-4	6.8310	0.0230	8,160	0.8160%
		Copper	7440-50-8	281.8530	0.9490	336,709	33.6709%
Lead Finish	External Plating	Tin	7440-31-5	4.8100	1.0000	5,746	0.5746%
Die Attach	Adhesive	Silver	7440-22-4	0.3601	0.8000	430	0.0430%
		Proprietary Bismaleimide	Trade Secret	0.0405	0.0900	48	0.0048%
		Proprietary Polymer	Trade Secret	0.0225	0.0500	27	0.0027%
		Methacrylate	Trade Secret	0.0090	0.0200	11	0.0011%
		Acrylate Ester	Trade Secret	0.0090	0.0200	11	0.0011%
		Organic Peroxide	Trade Secret	0.0090	0.0200	11	0.0011%
Die	Circuit	Silicon	7440-21-3	6.3013	1.0000	7,528	0.7528%
Wire	Interconnect	Copper	7440-50-8	1.4934	0.9825	1,784	0.1784%
		Palladium	7440-05-3	0.0266	0.0175	32	0.0032%
Mold Compound	Encapsulation	Epoxy Resin A	Trade Secret	15.8100	0.0300	18,887	1.8887%
		Epoxy Resin B	Trade Secret	15.8100	0.0300	18,887	1.8887%
		Phenol Resin	Trade Secret	26.3500	0.0500	31,478	3.1478%
		Silica(Amorphous)	60676-86-0	467.4490	0.8870	558,427	55.8427%
		Carbon Black	1333-86-4	1.5810	0.0030	1,889	0.1889%

Package Weight (mg): **837.0814**

% Total: **100.0000**

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.



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
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: 28L-SOIC PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
Document Number: 001-03052

Rev.	ECN No	Orig. of Change	Description of Change
**	385598	GFJ	New document
*A	2264910	HLR DCon	Updated Cypress Logo Added % weight of substance per Homogenous Material and % weight of substance per package on the Material Composition. Added CAS Number for Antimony Trioxide 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	2789670	MAHA	Added the following for assembly site 1: 1. Package weight B2:850 mg 2. Package QTP 054502 3. Table B2. NiPdAu Using Green Mold compound
*C	3040432	HLR	Added Note 4 on Footer Section.
*D	3236520	HLR	Added Assembly Site 2.
*E	3402928	REYD	Added Assembly Site 3 – JCET. Expressed in 4 decimal places the Weight by mg, % weight of substance per Homogenous material, % weight of substance per package and total package weight of Assembly Site1 Material Composition B2. Expressed Package Weight – Site 1-B1 in 4 decimal places.
*F	3805933	HLR	Updated the material composition tables to reflect 4 decimal places on values for Assembly Sites 1.B1 and 2. Added CAS number for Silica Fused, Crystalline Silica and Carbon Black on Assembly Site 1.B1 material composition.
*G	3971302	HLR	Added B2 Material Composition for Assembly Site 3 in reference to QTP No. 130503 for Automotive.
*H	4032244	YUM	Added assembly site name in the Assembly heading in site 1, 2, 3 and 4. Changed the Assembly Code to Assembly Site Name in site 1, 2, 3 and 4. Removed Tray and End Pin in the Indirect Materials Section.
*I	4083873	YUM	Added “P1/P2” in the assembly heading in assembly site 2.

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Rev.	ECN No	Orig. of Change	Description of Change
*J	4498519	REYD	Added B3 in Package Weight and QTP# 143703 under Site 3. Updated Material Composition Table under Assembly Site 3-B3.
*K	4573742	HLR	Sunset Due – No Change
*L	5026871	HLR MEL	Changed the substances with "-----" and Proprietary "to "Trade Secret". Removed "Distribution: WEB" and "Posting: NONE" from the document history page.
*M	5484685	YUM	Updated CY logo. Change the CAS number of substances with "Proprietary" to "Trade Secret".

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