



32L – SOJ (400 mils) Pb-Free Package

PACKAGE MATERIAL DECLARATION DATASHEET (PMDD)

| | | | |
|--------------------------------|---------|--------------------------------|----------|
| Cypress Package Code | VZ | Body Size (mil/mm) | 400 mils |
| Package Weight – Site 1 | 1390 mg | Package Weight – Site 2 | 1390 mg |

SUMMARY

The 32L – SOJ 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 # 061401 (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-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” 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 | 339.60 | 97.41 | 244,313 | 24.43% |
| | | Fe | 7439-89-6 | 8.37 | 2.40 | 6,019 | 0.60% |
| | | P | 7723-14-0 | 0.24 | 0.07 | 176 | 0.02% |
| | | Zn | 7440-66-6 | 0.42 | 0.12 | 301 | 0.03% |
| Lead Finish | External Plating | Ni | 7440-02-0 | 15.44 | 96.52 | 11,111 | 1.11% |
| | | Pd | 7440-05-3 | 0.78 | 1.74 | 563 | 0.06% |
| | | Au | 7440-57-5 | 0.25 | 1.74 | 180 | 0.02% |
| Die Attach | Adhesive | Ag | 7440-22-4 | 0.28 | 82.50 | 203 | 0.02% |
| | | Bismaleimide | Proprietary | 0.05 | 14.00 | 36 | 0.00% |
| | | Polymer | Proprietary | 0.01 | 2.00 | 15 | 0.00% |
| | | Methacrylate | ----- | 0.00 | 0.50 | 5 | 0.00% |
| | | Acylate ester | ----- | 0.00 | 0.50 | 5 | 0.00% |
| | | Organic Peroxide | ----- | 0.00 | 0.50 | 3 | 0.00% |
| Die | Circuit | Si | 7440-21-3 | 4.65 | 100.00 | 3,343 | 0.33% |
| Wire | Interconnect | Au | 7440-57-5 | 1.84 | 100.00 | 1,323 | 0.13% |
| Mold Compound | Encapsulation | Epoxy resin | Proprietary | 61.08 | 6.00 | 43,946 | 4.40% |
| | | Phenol resin | Proprietary | 50.90 | 5.00 | 36,622 | 3.66% |
| | | Silica | 60676-86-0 | 906.09 | 89.00 | 651,865 | 65.19% |

Package Weight (mg): **1390**

% 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 | < 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 |
| Tray | Tray | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 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 |
| | 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 |
| | 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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ASSEMBLY Site 2 – Package Qualification Report # 104805 / 104809 (See Note 1)

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| 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 |
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| | 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 |
| Tray | Tray | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 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 |
| | 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 |
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| | 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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Document History Page

Document Title: 32L - SOJ (400mils) PB-FREE PACKAGE MATERIAL DECLARATION
DATASHEET (PMDD)
Document Number: 001-07641.doc

| Rev. | ECN No. | Orig. of Change | Description of Change |
|------|---------|-----------------|--|
| ** | 437338 | QAD/ERI | New specification. |
| *A | 2264927 | HLR DCon | Changed Cypress Logo and Package code on Analysis Report. 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 weight in mg and % of i% weight of substance per package into 2 decimal point Replaced CML with WEB in distribution list. |
| *B | 3165769 | REYD | Added Assembly Site 2 – JCET |
| *C | 3232052 | QADTMP1 /QAD | No Change. Sunset Review. |

Distribution: WEB

Posting: None

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