



Material Declaration
Statement of Materials, Construction

Product: XRT86VL32IB-F
Package: 225L PBGA (19x19)

| | Component | | Material | | | Material Weight % | |
|--------------------|---------------|-------------|----------------------|--------------|-------------|-------------------|------------|
| | Name | Weight (mg) | Element/Compound | CAS No. | Weight (mg) | /Total Unit | /Component |
| 1 | Die | 25.40 | Silicon | 7440-21-3 | 25.4000 | 2.44 | 100.00 |
| 2 | Die Attach | 1.30 | Silver | 7440-22-4 | 0.4340 | 0.04 | 33.33 |
| | | | Bismaleimide monomer | - | 0.4340 | 0.04 | 33.33 |
| | | | Acrylate monomer | - | 0.1302 | 0.01 | 10.00 |
| | | | Epoxy Resin | - | 0.1302 | 0.01 | 10.00 |
| | | | Additive | - | 0.1302 | 0.01 | 10.00 |
| | | | Silane | - | 0.0434 | 0.00 | 3.33 |
| 3 | Substrate | 445.00 | SiO2 | 60676-86-0 | 48.9500 | 4.70 | 11.00 |
| | | | Acrylic | - | 44.5000 | 4.27 | 10.00 |
| | | | Epoxy | - | 35.6000 | 3.42 | 8.00 |
| | | | Bisphenol | 13676-54-5 | 66.7500 | 6.41 | 15.00 |
| | | | Triazine | 25722-66-1 | 77.8750 | 7.48 | 17.50 |
| | | | Copper | 7440-50-8 | 161.9578 | 15.55 | 36.40 |
| | | | Nickel | 7440-02-0 | 6.6750 | 0.64 | 1.50 |
| | | | Gold | 7440-57-5 | 2.4475 | 0.23 | 0.55 |
| | | | Br | - | 0.2448 | 0.02 | 0.06 |
| 4 | Mold Compound | 376.00 | Epoxy resin 1 | - | 11.2800 | 1.08 | 3.00 |
| | | | Epoxy resin 2 | - | 6.5800 | 0.63 | 1.75 |
| | | | Hardener 1 | - | 8.4600 | 0.81 | 2.25 |
| | | | Hardener 2 | - | 8.4600 | 0.81 | 2.25 |
| | | | Carbon Black | 1333-86-4 | 0.7520 | 0.07 | 0.20 |
| | | | Amorphous silica | 60676-86-0 | 321.6680 | 30.88 | 85.55 |
| | | | Crystal silica | 14808-60-7*1 | 18.8000 | 1.81 | 5.00 |
| 5 | Solder Ball | 187.00 | Sn | 7440-31-5 | 173.8165 | 16.69 | 92.95 |
| | | | Ag | 7440-22-4 | 10.2850 | 0.99 | 5.50 |
| | | | Cu | 7440-50-8 | 2.8985 | 0.28 | 1.55 |
| 6 | Wire | 6.83 | Gold | 7440-57-5 | 6.8293 | 0.66 | 99.99 |
| | | | Other | - | 0.0007 | 0.00 | 0.01 |
| Total Unit Weight: | | 1041.53 | | | | | |

Component weight is based on homogenous material used to assemble the unit. | Composition derived from the material declaration from vendors.

RoHS Certificate of Compliance

This package is fully RoHS compliant. The table above shows that this package meets the following RoHS requirements for EACH PACKAGE COMPONENT.

- RoHS 2 (Recast) 2011/65/EU | Fully Compliant
- China RoHS | Fully Compliant
- RoHS-6 | Fully Compliant
- Non Use of PFOS & PFOA
- REACH | Fully Compliant
- Halogen-free | Green

| EU RoHS Restricted Substance | Allowable Limit (at homogenous material level) |
|--|---|
| Cadmium & its compounds (Cd) | 100 ppm (0.01 weight %) |
| Hexavalent Chromium & its compounds (Cr(VI)) | 1000 ppm (0.10 weight %) |
| Mercury & its compounds (HG) | 1000 ppm (0.10 weight %) |
| Polybrominated biphenyls (PBB) | 1000 ppm (0.10 weight %) |
| Polybrominated diphenyl ethers (PBDE) | 1000 ppm (0.10 weight %) |
| Lead & its compounds (Pb) | 1000 ppm (0.10 weight %) |



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Dodd-Frank Wall Street Reform and Consumer Protection Act, July 21, 2010

We comply with this conflict metal free policy that restricts the use of those conflict metals, mining from the Democratic Republic of Congo (DRC) and it's adjoining countries. Exar will not accept product which uses these conflict metals from these areas. We require our suppliers to enforce this policy and be able to identify and verify from their sources of minerals are conflict free. Suppliers are required to report if they or any supplier through their supply chain use any of these conflict metals that are derived from certain conflict minerals originating in the DRC or an adjoining country. Exar Corporation is not aware of any conflict metals to be used in any of their products.

Flammability rating of UL 94-V0

MSL Pb-Free: L4 @ 245°C

Chiew Mee Foo, QA Manager
