

LTM4630-1-PBF-BGA 144LD 16mm X 16mm X 5.01mm (TABLE OF MATERIAL DECLARATION)

The LTM4630-1 is RoHS compliant per EU RoHS Directive 2003/95/EC.

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

| No. | Part Name | Material Name | Component Weight (gram) | Materials Analysis (element) | CAS Number | Material Mass (gram) | Materials Analysis (weight %) |
|-----|---------------------------|---------------|-------------------------|--|---|----------------------|-------------------------------|
| 1 | Substrate | Circuit Board | 0.2914 | Barium Compounds | 7727-43-7 | 0.00519 | 1.78 |
| | | | | Bismaleimide/Triazine Resin/Filler Substances (Silica Crystalline) | 105391-33-1 1156-51-0/9003-36-5/21645-51-2 non-disclosure | 0.08637 | 29.64 |
| | | | | Copper Metal | 7440-50-8 | 0.11586 | 39.76 |
| | | | | Copper Compounds | 147-14-8 | 0.00005 | 0.02 |
| | | | | Silver | 7440-22-4 | 0.00008 | 0.03 |
| | | | | Ecotoxic substances | 7440-38-2 7439-92-1 | 0.00002 | 0.01 |
| | | | | Phosphorus | 7723-14-0 | 0.00032 | 0.11 |
| | | | | Palladium | 7440-05-3 | 0.00005 | 0.02 |
| | | | | Gold metal or alloy | 7440-57-5 | 0.00017 | 0.06 |
| | | | | Nickel | 7440-02-0 | 0.00364 | 1.25 |
| | | | | Zinc | 7440-66-6 | 0.00019 | 0.06 |
| | | | | Continuous Filament Fiber Glass | 65997-17-3 | 0.06787 | 23.29 |
| | | | | Acrylic Resin | non-disclosure | 0.00991 | 3.40 |
| | | | | Epoxy Resin | non-disclosure | 0.00012 | 0.04 |
| | | | | Chromium(III) oxide | 1308-38-9 | 0.00001 | 0.00 |
| | | | | Silica amorphous | 7631-86-9 | 0.00006 | 0.02 |
| | | | | Talc;not containing fibers like asbestos | 14807-96-6 | 0.00061 | 0.21 |
| | | | | Aromatic carbonyl compounds | non-disclosure | 0.00055 | 0.19 |
| | | | | Cyanoguanidine | 461-58-5 | 0.00002 | 0.01 |
| | | | | Amine compounds | non-disclosure | 0.00007 | 0.03 |
| | | | | Leveling agent and others | non-disclosure | 0.00023 | 0.08 |
| | | | | Curing reagent | *non-disclosure | 0.00002 | 0.01 |
| 2 | Solder Paste | Alloy | 0.0401 | Sn | 7440-31-5 | 0.03810 | 95.00 |
| | | | | Sb | 7440-36-0 | 0.00201 | 5.00 |
| 3 | Passive/Active Components | | 1.1823 | Iron Powder (Fe) | 7439-89-6 | 0.93619 | 79.18 |
| | | | | Copper (Cu) | 7440-50-8 | 0.22647 | 19.15 |
| | | | | Nickel (Ni) | 7440-02-0 | 0.00250 | 0.21 |
| | | | | Tin (Sn) | 7440-31-5 | 0.00759 | 0.64 |
| | | | | Ceramic (Ba) Compounds | 12047-27-7 | 0.00955 | 0.81 |
| 4 | FC-DFN | | 0.1905 | | | | |
| | Active Ics | Silicon | | Silicon (Si) | 7440-21-3 | 0.00025 | 0.13 |
| | Clip | Copper Clip | | Copper (Cu) | 7440-50-8 | 0.02952 | 15.50 |
| | | | | Iron (Fe) | 7439-89-6 | 0.00073 | 0.38 |
| | | | | Zinc (Zn) | 7440-66-6 | 0.00004 | 0.02 |
| | Solder Paste | Alloy | | Lead (Pb) | 7439-92-1 | 0.00284 | 1.49 |
| | | | | Silver (Ag) | 7440-22-4 | 0.00008 | 0.04 |
| | | | | Tin (Sn) | 7440-31-5 | 0.00015 | 0.08 |

| No. | Part Name | Material Name | Component Weight (gram) | Materials Analysis (element) | CAS Number | Material Mass (gram) | Materials Analysis (weight %) |
|----------------------|---------------|---------------|-------------------------|------------------------------|----------------|----------------------|-------------------------------|
| | Encapsulation | Epoxy Resin | | epoxy resin | 29690-82-2 | 0.00346 | 1.81 |
| | | | | Phenol | 9003-35-4 | 0.00208 | 1.09 |
| | | | | Silica (Si) | 60676-86-0 | 0.06359 | 33.38 |
| | Lead frame | Lead frame | | Copper (Cu) | 7440-50-8 | 0.07072 | 37.13 |
| | | | | Iron (Fe) | 7439-89-6 | 0.00174 | 0.92 |
| | | | | Silver (Ag) | 7440-22-4 | 0.00101 | 0.53 |
| | | | | Zinc (Zn) | 7440-66-6 | 0.00010 | 0.05 |
| | | | | Tin (Sn) | 7440-31-5 | 0.01321 | 6.93 |
| | Wire 1 | Copper | | Copper (Cu) | 7440-50-8 | 0.00005 | 0.03 |
| | Wire 2 | Gold | | Gold (Au) | 7440-57-5 | 0.00092 | 0.48 |
| | | | | | | | |
| 5 | Active lcs | Silicon | 0.0017 | Silicon | 7440-21-3 | 0.00167 | 100.00 |
| 6 | Wire | Gold | 0.0003 | Au | 7440-57-5 | 0.00031 | 99.99 |
| 7 | Solder Balls | SAC-305 | 0.2419 | Tin (Sn) | 7440-31-5 | 0.23343 | 96.50 |
| | | | | Silver (Ag) | 7440-22-4 | 0.00726 | 3.00 |
| | | | | Copper (Cu) | 7440-50-8 | 0.00121 | 0.50 |
| 8 | Encapsulation | Epoxy Resin | 1.4346 | Fused Silica | 60676-86-0 | 1.10755 | 77.20 |
| | | | | Epoxy Resin | non-disclosure | 0.12768 | 8.90 |
| | | | | Phenol Resin | non-disclosure | 0.12768 | 8.90 |
| | | | | Crytalline Silica | 14808-60-7 | 0.04304 | 3.00 |
| | | | | Carbon Black | 1333-86-4 | 0.00717 | 0.50 |
| | | | | Metal Hydroxide | non-disclosure | 0.02152 | 1.50 |
| Total Package Weight | | | 3.3828 | | | | |

Note: Composition derived from MSDS and material C of C from Vendors
Component Weight based on assembly of generic parts