



MODEL 625 SERIES OSCILLATOR

MATERIAL CONTENT DECLARATION REPORT

CTS Electronic Components follows the Joint Industry Guidelines (JIG) industry consortia recommendations as defined in controlling document JIG-101 for "Green Compliance" Level A and Level B material content restrictions and standardized reporting.

RoHS COMPLIANT YES
 RoHS EXEMPTIONS NO

| Level A – Restricted Material/Substance | Material/Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material Substance Mass (g/PPM) | If Yes, Detailed Material Substance Information |
|--|--|---|---|
| Asbestos | N | | |
| Azo colorants ¹ | N | | |
| Cadmium/Cadmium compounds ² | N | | |
| Hexavalent Chromium / Hexavalent Chromium Compounds ² | N | | |
| Lead / Lead Compounds ² | N | | |
| Mercury / Mercury Compounds ² | N | | |
| Ozone Depleting Substances (CFCs, HCFCs, HBFCs, carbon tetrachloride, etc) | N | | |
| Polybrominated Biphenyls (PBBs) ² | N | | |
| Polybrominated Diphenylethers (PBDEs) ² | N | | |
| Polychlorinated Biphenyls (PCBs) | N | | |
| Polychlorinated Naphthalenes (more than 3 chlorine atoms) | N | | |
| Radioactive Substances | N | | |
| Shortchain Chlorinated Paraffins | N | | |
| Tributyl Tin (TBT) and Triphenyl Tin (TPT) | N | | |
| Tributyl Tin Oxide (TBTO) | N | | |

(1) Applicable to products and subparts that may come into direct contact with human skin.
 (2) Reported substances per EU RoHS Directive 2002/95/EC.

| Level B – Reported Material/Substance | Material/Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material Substance Mass (g/PPM) | If Yes, Detailed Material Substance Information |
|--|--|---|---|
| Antimony/Antimony Compounds | N | | |
| Arsenic/Arsenic Compounds | N | | |
| Beryllium/Beryllium Compounds | N | | |
| Bismuth/ Bismuth Compounds | N | | |
| Brominated Flame Retardants (other than PBBs or PBDEs) | N | | |
| Nickel/Nickel Compounds (external applications only) | N | | |
| Phthalates | N | | |
| Selenium/Selenium Compounds | N | | |
| Polyvinyl Chloride (PVC) | N | | |



ELEMENTAL ANALYSIS

MODEL 625 SERIES OSCILLATOR

RoHS/Green
Compliant
(6/6)

WEIGHT
(mg)
15.0010

MSL
RATING
1

MAX
REFLOW
260°C



| PRODUCT BREAKDOWN | MATERIAL | CAS NUMBER | WEIGHT OF BOM ITEM (g) | % BY WEIGHT (Comp. Item) | mg/UNIT | % BY WEIGHT OF UNIT | REMARKS/SOURCE OF INFORMATION |
|-----------------------|--|-------------------------|------------------------|--------------------------|----------------|---------------------|-------------------------------|
| Package | | | | | | | |
| Ceramic | Al ₂ O ₃ (aluminium trioxide) | 1344-28-1 | 0.010712 | 95.05% | 10.1818 | 67.87% | |
| Conductors | W (tungsten) [Base] | 7440-33-7 | | 4.16% | 0.4456 | 2.97% | |
| | Ni (nickel) plate [Barrier] | 7440-02-0 | | 0.44% | 0.0471 | 0.31% | |
| | Au (gold) plate [Finish] | 7440-57-5 | | 0.35% | 0.0375 | 0.25% | |
| | | | | 100.00% | 10.7120 | | |
| Seal Ring | Fe (iron) kovar | 7439-89-6 | 0.001322 | 53.00% | 0.7007 | 4.67% | |
| | Ni (nickel) Kovar | 7440-02-0 | | 29.00% | 0.3834 | 2.56% | |
| | Co (cobalt) Kovar | 7440-48-4 | | 17.00% | 0.2247 | 1.50% | |
| | Au (gold) plate | 7440-57-5 | | 1.00% | 0.0132 | 0.09% | |
| | | | | 100.00% | 1.3220 | | |
| Sub-Assembly | | | | | | | |
| Silicon Die (IC) | Si (silicon) | 7440-21-3 | 0.000312 | 98.50% | 0.3073 | 2.05% | |
| | Al (aluminium) | 7429-90-5 | | 1.50% | 0.0047 | 0.03% | |
| | | | | 100.00% | 0.3120 | | |
| Die Adhesive | Ag (silver) | 7440-22-4 | 0.000330 | 75.00% | 0.24750 | 1.65% | |
| | Bisphenol F Epoxy Resin | 54208-63-8 | | 20.00% | 0.06600 | 0.44% | |
| | 1,4 - Butanediol Diglycidyl Ether | 2425-79-8 | | 5.00% | 0.01650 | 0.11% | |
| | | | | 100.00% | 0.3300 | | |
| Final Assembly | | | | | | | |
| Crystal Blank | SiO ₂ (silicon dioxide) | 14808-60-7 | 0.000297 | 41.38% | 0.1229 | 0.82% | |
| | Cr plate (chromium) | 7440-47-3 | | 21.98% | 0.0653 | 0.44% | |
| | Ag plate (silver) | 7440-22-4 | | 36.64% | 0.1088 | 0.73% | |
| | | | | 100.00% | 0.2970 | | |
| Blank Adhesive | Ag (silver) | 7440-22-4 | 0.000110 | 75.00% | 0.0825 | 0.55% | |
| | Pd (palladium) | 7440-05-3 | | 1.00% | 0.0011 | 0.01% | |
| | Undecane [CH ₃ (CH ₂) ₉ CH ₃] | 1120-21-4 | | 10.00% | 0.0110 | 0.07% | |
| | Dodecane [CH ₃ (CH ₂) ₁₀ CH ₃] | 112-40-3 | | 4.00% | 0.0044 | 0.03% | |
| | Silica [Si(CH ₃) ₄] | 7631-86-9 99439-28-8 | | 10.00% | 0.0110 | 0.07% | |
| | | | | 100.00% | 0.1100 | | |
| Metal Cover | Fe (iron) kovar | 7439-89-6 | 0.001918 | 53.00% | 1.0165 | 6.78% | |
| | Ni (nickel) Kovar | 7440-02-0 | | 29.00% | 0.5562 | 3.71% | |
| | Co (cobalt) Kovar | 7440-48-4 | | 17.00% | 0.3261 | 2.17% | |
| | Ni (nickel) plate | 7440-02-0 | | 1.00% | 0.0192 | 0.13% | |
| | | | | 100.00% | 1.9180 | | |
| | | Totals: | 0.015001 | | 15.0010 | 100.00% | |

| MATERIALS COMBINED | CAS NUMBER | WEIGHT OF MATERIAL (mg) | % BY WEIGHT OF UNIT |
|--|-------------------------|-------------------------|---------------------|
| 1,4 - Butanediol Diglycidyl Ether | 2425-79-8 | 0.0165 | 0.11% |
| Ag (silver) | 7440-22-4 | 0.4388 | 2.93% |
| Al (aluminum) | 7429-90-5 | 0.0047 | 0.03% |
| Al ₂ O ₃ (aluminium trioxide) | 1344-28-1 | 10.1818 | 67.87% |
| Au (gold) | 7440-57-5 | 0.0507 | 0.34% |
| Bisphenol F Epoxy Resin | 54208-63-8 | 0.0660 | 0.44% |
| Co (cobalt) | 7440-48-4 | 0.5508 | 3.67% |
| Cr (chromium) | 7440-47-3 | 0.0653 | 0.44% |
| Dodecane [CH ₃ (CH ₂) ₁₀ CH ₃] | 112-40-3 | 0.0044 | 0.03% |
| Fe (iron) | 7439-89-6 | 1.7172 | 11.45% |
| Ni (nickel) | 7440-02-0 | 1.0059 | 6.71% |
| Pd (palladium) | 7440-05-3 | 0.0011 | 0.01% |
| Si (silicon) | 7440-21-3 | 0.3073 | 2.05% |
| Silica [Si(CH ₃) ₄] | 7631-86-9 99439-28-8 | 0.0110 | 0.07% |
| SiO ₂ (silicon dioxide) | 14808-60-7 | 0.1229 | 0.82% |
| Undecane [CH ₃ (CH ₂) ₉ CH ₃] | 1120-21-4 | 0.0110 | 0.07% |
| W (tungsten) | 7440-33-7 | 0.4456 | 2.97% |