# Material Composition Data

**Product: GTXO-C86** Page 1

Golledge

**GTXO-C86 - 2.5 & 3.3V (VC)TCXO CMOS High Temp**

| Sub-Assembly | Material | Substance | CAS No | Mass (mg) | Sub-Assembly % by mass |
|---|---|---|---|---|---|
| **Adhesive** | Adhesive | Epoxy resin trade secret | 0 | 5.000 | 100.00 |
| **Gold Bumps** | gold | Au | 7440-57-5 | 0.100 | 100.00 |
| **IC** | Silicon substrate | Si | 7440-21-3 | 1.994 | 99.70 |
| | Silicon substrate | Al | 7429-90-5 | 0.006 | 0.30 |
| **TP Base** | Au plate | Au | 7440-57-5 | 0.490 | 1.17 |
| | Ceramic | Al2O3 | 1344-28-1 | 34.335 | 81.75 |
| | Ceramic | Cr2O3 | 1308-38-9 | 0.763 | 1.82 |
| | Ceramic | Mo | 7439-98-7 | 0.763 | 1.82 |
| | Ceramic | SiO2 | 14808-60-7 | 2.289 | 5.45 |
| | Metallisation | W | 7440-33-7 | 3.180 | 7.57 |
| | Ni plate | Ni | 7440-02-0 | 0.180 | 0.43 |
| **Tin paste** | solder alloy | Sn | 7440-31-5 | 0.846 | 84.60 |
| | solder alloy | Sb | 7440-36-0 | 0.044 | 4.40 |
| | solder alloy | Flux trade secret | 0 | 0.110 | 11.00 |
| **XX Crystal** | Adhesive | Ag | 7440-22-4 | 0.640 | 1.27 |
| | Adhesive | SiO2 | 14808-60-7 | 0.080 | 0.16 |
| | Adhesive | Epoxy resin trade secret | 0 | 0.080 | 0.16 |
| | Base Ceramic | Al2O3 | 1344-28-1 | 22.896 | 45.43 |
| | Base Ceramic | Cr2O3 | 1308-38-9 | 0.509 | 1.01 |
| | Base Ceramic | Mo | 7439-98-7 | 0.509 | 1.01 |
| | Base Ceramic | SiO2 | 14808-60-7 | 1.526 | 3.03 |
| | Base Metallisation | W | 7440-33-7 | 4.780 | 9.48 |
| | Base Plate Au | Au | 7440-57-5 | 0.210 | 0.42 |
| | Base Plate Ni | Ni | 7440-02-0 | 0.750 | 1.49 |
| | Base Seal ring | Co | 7440-48-4 | 1.031 | 2.05 |
| | Base Seal ring | Fe | 7439-89-6 | 3.037 | 6.03 |
| | Base Seal ring | Ni | 7440-02-0 | 1.662 | 3.30 |
| | Base Solder | Ag | 7440-22-4 | 1.008 | 2.00 |
| | Base Solder | Cu | 7440-50-8 | 0.412 | 0.82 |
| | Blank | SiO2 | 14808-60-7 | 1.000 | 1.98 |
| | Electrode material | Ni | 7440-02-0 | 0.020 | 0.04 |
| | Electrode material | Au | 7440-57-5 | 0.180 | 0.36 |
| | Kovar Lid | Fe | 7439-89-6 | 5.050 | 10.02 |
| | Kovar Lid | Ni | 7440-02-0 | 2.659 | 5.28 |
| | Kovar Lid | Co | 7440-48-4 | 1.709 | 3.39 |
| | Lid Plate | Ni | 7440-02-0 | 0.648 | 1.29 |

| Sub-Assembly | Material | Substance | CAS No | Mass (mg) | Sub-Assembly % by mass |
|---|---|---|---|---|---|
| | | | **Total Mass:** | **100.496 mg** | |

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