



## Material Composition Sheet

**Product:** GO1515-CTA  
**Package Type:** VCO- reels of 3K,5v  
**Manufacturer:** Gennum Corporation

**Date:** 06-Dec-2006

| Component                  | BOM  | Weight of Component (mg) | Substance                  | Weight of Substance (mg) | Homogeneous Material |            |       |       |         |
|----------------------------|------|--------------------------|----------------------------|--------------------------|----------------------|------------|-------|-------|---------|
|                            |      |                          |                            |                          | %                    | ppm        |       |       |         |
| Capacitor                  |      | 19.36                    | Copper                     | 0.24                     | 1.23                 | 12397      |       |       |         |
|                            |      |                          | Copper                     | 2.97                     | 15.34                | 153409     |       |       |         |
|                            |      |                          | Nickel                     | 0.03                     | 0.15                 | 1550       |       |       |         |
|                            |      |                          | Nickel                     | 0.05                     | 0.25                 | 2583       |       |       |         |
|                            |      |                          | Nickel                     | 0.33                     | 1.70                 | 17045      |       |       |         |
|                            |      |                          | Nickel                     | 0.66                     | 3.40                 | 34091      |       |       |         |
|                            |      |                          | Pb                         | 0.03                     | 0.15                 | 1550       |       |       |         |
|                            |      |                          | Pb                         | 0.29                     | 1.49                 | 14979      |       |       |         |
|                            |      |                          | Tin                        | 0.05                     | 0.25                 | 2583       |       |       |         |
|                            |      |                          | Tin                        | 0.50                     | 2.58                 | 25826      |       |       |         |
|                            |      |                          | Titanic acid barium system | 1.23                     | 6.35                 | 63533      |       |       |         |
|                            |      |                          | Titanic acid barium system | 12.98                    | 67.04                | 670455     |       |       |         |
|                            |      |                          |                            |                          |                      | Sub-total: | 19.36 | 99.93 | 1000001 |
|                            |      |                          | Case                       |                          | 54.93                | Copper     | 35.62 | 64.85 | 648509  |
| Iron                       | 0.00 | 0.00                     |                            |                          |                      | 55         |       |       |         |
| Lead                       | 0.00 | 0.00                     |                            |                          |                      | 55         |       |       |         |
| Manganese and its compound | 0.18 | 0.32                     |                            |                          |                      | 3277       |       |       |         |
| Nickel                     | 9.34 | 17.00                    |                            |                          |                      | 170047     |       |       |         |
| Zinc and its compound      | 9.78 | 17.80                    |                            |                          |                      | 178058     |       |       |         |
|                            |      |                          |                            |                          |                      | Sub-total: | 54.93 | 99.97 | 1000001 |
| Diode                      |      | 1.81                     | 3 antimony oxide           | 0.02                     | 1.10                 | 11038      |       |       |         |
|                            |      |                          | Copper                     | 0.50                     | 27.59                | 275938     |       |       |         |
|                            |      |                          | Epoxy Resin                | 1.20                     | 66.22                | 662252     |       |       |         |
|                            |      |                          | Gold                       | 0.03                     | 1.65                 | 16556      |       |       |         |
|                            |      |                          | Other bromine system       | 0.02                     | 1.10                 | 11038      |       |       |         |
|                            |      |                          | Pb                         | 0.00                     | 0.11                 | 1104       |       |       |         |
|                            |      |                          | Silicone                   | 0.02                     | 1.10                 | 11038      |       |       |         |
|                            |      |                          | Tin                        | 0.02                     | 1.10                 | 11038      |       |       |         |
|                            |      |                          |                            |                          |                      | Sub-total: | 1.81  | 99.97 | 1000002 |
| Print Circuit Board        |      | 82.80                    | Acrylic resin              | 1.31                     | 1.58                 | 15821      |       |       |         |
|                            |      |                          | Barium sulfate             | 0.71                     | 0.85                 | 8575       |       |       |         |
|                            |      |                          | Copper                     | 34.25                    | 41.36                | 413647     |       |       |         |
|                            |      |                          | Epoxy Resin                | 0.36                     | 0.43                 | 4348       |       |       |         |
|                            |      |                          | Epoxy Resin                | 17.97                    | 21.70                | 217029     |       |       |         |
|                            |      |                          | Glass                      | 22.47                    | 27.13                | 271377     |       |       |         |
|                            |      |                          | Gold                       | 0.04                     | 0.04                 | 483        |       |       |         |
|                            |      |                          | Halogenated epoxy resin    | 4.50                     | 5.43                 | 54348      |       |       |         |
|                            |      |                          | Nickel                     | 1.19                     | 1.43                 | 14372      |       |       |         |
|                            |      |                          |                            |                          |                      | Sub-total: | 82.80 | 99.95 | 1000000 |
| Resistor                   |      | 2.55                     | Ag                         | 0.11                     | 4.31                 | 43188      |       |       |         |
|                            |      |                          | Al2O3                      | 1.78                     | 69.88                | 698861     |       |       |         |
|                            |      |                          | B2O3                       | 0.01                     | 0.19                 | 1963       |       |       |         |
|                            |      |                          | CaO                        | 0.01                     | 0.39                 | 3926       |       |       |         |
|                            |      |                          | Carbon Black               | 0.02                     | 0.78                 | 7852       |       |       |         |
|                            |      |                          | Epoxy Resin                | 0.16                     | 6.28                 | 62819      |       |       |         |
|                            |      |                          | MgO                        | 0.02                     | 0.78                 | 7852       |       |       |         |
|                            |      |                          | MnO2                       | 0.00                     | 0.03                 | 393        |       |       |         |
|                            |      |                          | Ni                         | 0.17                     | 6.67                 | 66745      |       |       |         |
|                            |      |                          | PbO                        | 0.03                     | 1.17                 | 11779      |       |       |         |
|                            |      |                          | Pd                         | 0.00                     | 0.00                 | 0          |       |       |         |
|                            |      |                          | RuO2                       | 0.01                     | 0.39                 | 3926       |       |       |         |
|                            |      |                          | SiO2                       | 0.04                     | 1.57                 | 15705      |       |       |         |
|                            |      |                          | Silica                     | 0.03                     | 1.17                 | 11779      |       |       |         |
|                            |      |                          | Sn                         | 0.16                     | 6.28                 | 62819      |       |       |         |
|                            |      |                          | ZnO                        | 0.00                     | 0.03                 | 393        |       |       |         |
|                            |      |                          |                            |                          |                      | Sub-total: | 2.55  | 99.92 | 1000000 |

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|              |  |               |                           |       |       |         |
|--------------|--|---------------|---------------------------|-------|-------|---------|
| Solder Paste |  | 12.92         | Antimony                  | 0.65  | 5.03  | 50310   |
|              |  |               | Tin                       | 12.27 | 94.96 | 949690  |
|              |  |               | Sub-total:                | 12.92 | 99.99 | 1000000 |
| Transistor   |  | 6.01          | 3 antimony oxide          | 0.07  | 1.16  | 11647   |
|              |  |               | BrominatedEpoxyResin      | 0.07  | 1.16  | 11647   |
|              |  |               | Copper alloy              | 1.90  | 31.61 | 316140  |
|              |  |               | Epoxy Resin               | 0.80  | 13.31 | 133111  |
|              |  |               | Gold                      | 0.04  | 0.66  | 6656    |
|              |  |               | Organophosphorus compound | 0.02  | 0.33  | 3328    |
|              |  |               | Pb                        | 0.05  | 0.83  | 8319    |
|              |  |               | Silica                    | 2.45  | 40.76 | 407654  |
|              |  |               | Silicone                  | 0.10  | 1.66  | 16639   |
|              |  |               | Silver                    | 0.06  | 0.99  | 9983    |
|              |  |               | Tin                       | 0.45  | 7.48  | 74875   |
|              |  |               | Sub-total:                | 6.01  | 99.95 | 999999  |
|              |  | <b>Total:</b> | <b>180.38</b>             |       |       |         |

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