

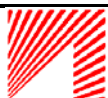
Material Declaration



| | |
|------------------|-------------|
| Package Type | 5 x 3.2 |
| Package Size | 5 x 3.2 mm |
| Terminal Finish | Gold |
| Finish Thickness | 0.5 microns |
| Weight (mg) | 50.000 |
| MSL | 1 |

| | |
|--------|------|
| Series | CPPL |
|--------|------|

| Item | Material | Element | Content (mg) | Content (wt%) | CAS # | |
|--------------|---------------|------------------------|---------------|-----------------|------------|-----------|
| Cover | Kovar | Nickel (Ni) | 2.201 | 4.402% | 7440-02-0 | |
| | | Cobalt (Co) | 1.281 | 2.563% | 7440-48-4 | |
| | | Iron (Fe) | 4.116 | 8.232% | 7439-89-6 | |
| Base | Ceramic | Alumina (Al2O3) | 28.096 | 56.193% | 1344-28-1 | |
| | | Silicon Dioxide (SiO2) | 1.117 | 2.233% | 14808-60-7 | |
| | | Chromium Oxide (Cr2O3) | 1.199 | 2.398% | 1308-38-9 | |
| | | Titanium Oxide (TiO2) | 0.311 | 0.623% | 13463-67-7 | |
| | | Calcium Oxide (CaO) | 0.107 | 0.215% | 1305-79-9 | |
| | | Magnesium Oxide (MgO) | 0.154 | 0.308% | 1309-48-4 | |
| | | Tungsten (W) | 4.259 | 8.518% | 7440-33-7 | |
| | | Seal Ring | Nickel (Ni) | 1.664 | 3.329% | 7440-02-0 |
| | | | Gold (Au) | 0.190 | 0.379% | 7440-57-5 |
| | Iron (Fe) | | 2.079 | 4.159% | 7439-89-6 | |
| | Cobalt (Co) | | 0.791 | 1.582% | 7440-48-4 | |
| | Silver Solder | Silver (Ag) | 0.608 | 1.217% | 7440-22-4 | |
| | | Copper (Cu) | 0.107 | 0.215% | 7440-50-8 | |
| | IC | IC | Aluminum (Al) | 0.001 | 0.002% | 7429-90-5 |
| | | | Titanium (Ti) | 0.000 | 0.001% | 7440-32-6 |
| Silicon (Si) | | | 0.344 | 0.687% | 7440-21-3 | |
| Gold | | Gold (Au) | 0.103 | 0.205% | 7440-57-5 | |
| Adhesive | | Silver (Ag) | 0.00007 | 0.00013% | 7440-22-4 | |
| | | Epoxy | 0.00002 | 0.00004% | | |
| Capacitor | Body | Nickel (Ni) | 0.010 | 0.020% | 7440-02-0 | |
| | | BaTiO3 | 0.830 | 1.660% | 12047-27-7 | |
| | Termination | Nickel (Ni) | 0.013 | 0.026% | 7440-02-0 | |
| | | Tin (Sn) | 0.019 | 0.038% | 7440-31-5 | |
| | | Copper (Cu) | 0.025 | 0.050% | 7440-50-8 | |
| Crystal | Crystal | Silicon Dioxide (SiO2) | 0.365 | 0.730% | 14808-60-7 | |
| | Electrode | Silver (Ag) | 0.007 | 0.014% | 7440-22-4 | |
| | | Nickel (Ni) | 0.00006 | 0.00011% | 7440-02-0 | |
| | Adhesive | Silver (Ag) | 0.00013 | 0.00026% | 7440-22-4 | |
| | | Silicon (Si) | 0.00004 | 0.00009% | 7440-21-3 | |
| Total | | | 50.000 | 100.000% | | |



Cardinal Components, Inc.
145 Rt. 46 West
Wayne, NJ 07470

TEL: (973)785-1333
E-MAIL: sales@cardinalxtal.com
WEB: http://www.cardinalxtal.com