

# Material Declaration



|                  |             |
|------------------|-------------|
| Package Type     | 5 x 7       |
| Package Size     | 5 x 7 mm    |
| Terminal Finish  | Gold        |
| Finish Thickness | 0.5 microns |
| Weight (mg)      | 148.000     |
| MSL              | 1           |

|        |      |
|--------|------|
| Series | CAM7 |
|--------|------|

| Item           | Material       | Element  | Content (mg)  | Content (wt%)  | CAS #           |           |
|----------------|----------------|--|---------------|----------------|-----------------|-----------|
| Cover          | Kovar          | Nickel (Ni)                                      | 6.397         | 4.322%         | 7440-02-0       |           |
|                |                | Cobalt (Co)                                      | 3.724         | 2.516%         | 7440-48-4       |           |
|                |                | Iron (Fe)  | 11.961        | 8.082%         | 7439-89-6       |           |
|                | Plating        | Nickel (Ni)                                      | 0.915         | 0.618%         | 7440-02-0       |           |
| Base           | Ceramic        | Alumina (Al <sub>2</sub> O <sub>3</sub> )        | 72.601        | 49.054%        | 1344-28-1       |           |
|                |                | Silicon Dioxide (SiO <sub>2</sub> )              | 2.881         | 1.947%         | 7631-86-9       |           |
|                |                | Chromium Oxide (Cr <sub>2</sub> O <sub>3</sub> ) | 3.100         | 2.094%         | 1308-38-9       |           |
|                |                | Titanium Oxide (TiO <sub>2</sub> )               | 0.801         | 0.541%         | 13463-67-7      |           |
|                |                | Calcium Oxide (CaO)                              | 0.270         | 0.183%         | 1305-79-9       |           |
|                |                | Magnesium Oxide (MgO)                            | 0.406         | 0.274%         | 1309-48-4       |           |
|                |                | Molybdenum (Mo)                                  | 0.447         | 0.302%         | 7439-98-7       |           |
|                |                | Metallization                                    | Tungsten (W)  | 14.354         | 9.698%          | 7440-33-7 |
|                | Nickel Plating | Nickel (Ni)                                      | 1.851         | 1.251%         | 7440-02-0       |           |
|                |                | Cobalt (Co)                                      | 0.468         | 0.316%         | 7440-48-4       |           |
|                | Gold Plating   | Gold (Au)  | 0.645         | 0.436%         | 7440-57-5       |           |
|                | Seal ring      | Iron (Fe)  | 11.649        | 7.871%         | 7439-89-6       |           |
|                |                | Nickel (Ni)                                      | 6.262         | 4.231%         | 7440-02-0       |           |
|                |                | Cobalt (Co)                                      | 3.672         | 2.481%         | 7440-48-4       |           |
|                | Silver solder  | Silver (Ag)                                      | 2.736         | 1.848%         | 7440-22-4       |           |
|                |                | Copper (Cu)                                      | 0.478         | 0.323%         | 7440-50-8       |           |
|                | IC             | IC   | Aluminum (Al) | 0.027          | 0.018%          | 7429-90-5 |
|                |                |  | Silicon (Si)  | 0.420          | 0.284%          | 7440-21-3 |
|                |                | Gold   | Gold (Au)     | 0.091          | 0.062%          | 7440-57-5 |
|                |                | Adhesive   | Silver (Ag)   | 0.155          | 0.105%          | 7440-22-4 |
| Phenolic Resin |                |  | 0.014         | 0.009%         |                 |           |
| Epoxy Resin    |                |  | 0.014         | 0.009%         |                 |           |
| Crystal        | Crystal        | Silicon Dioxide (SiO <sub>2</sub> )              | 1.539         | 1.040%         | 14808-60-7      |           |
|                | Electrode      | Silver (Ag)                                      | 0.033         | 0.022%         | 7440-22-4       |           |
|                |                | Chromium (Cr)                                    | 0.0005        | 0.0004%        | 7440-47-3       |           |
|                | Adhesive       | Silver (Ag)                                      | 0.077         | 0.052%         | 7440-22-4       |           |
|                |                | Silicon (Si)                                     | 0.014         | 0.009%         | 7440-21-3       |           |
|                | <b>TOTAL</b>   |  |               | <b>148.000</b> | <b>100.000%</b> |           |



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