

**Material Data Declaration Sheet**

**ECS INC. INTERNATIONAL**

|                      |                                     |
|----------------------|-------------------------------------|
| ECS Model Number     | ECX-53BQZ (-30BQZ Package Type)     |
| Product Description  | 5.0 x 3.2 SMD AEC-Q200 TPMS Crystal |
| Product Revision     |                                     |
| Product Total Weight | 0.077g/pcs                          |



|                     |              |   |
|---------------------|--------------|---|
| Contact Information | Company      | ECS INC. INTERNATIONAL                    |
|                     | Contact Name | AJ Anderson                               |
|                     | Address      | 15351 W. 109th Street<br>Lenexa, KS 66219 |
|                     | Phone Number | 913-782-7787                              |

| Homogenous Component/Subcomponent | Homogenous Component/Subcomponent Weight (g) | Substance                                     | CAS number | Substance Weight (g) | PPM Level (If Available) (Substance Weight/Total Homogenous Component or Subcomponent Weight*1000000) | Purpose/Location   |
|-----------------------------------|--|---|------------|----------------------|---|--------------------|
| 5032 PKG                          | 0.0330                                       | Alumina-Al <sub>2</sub> O <sub>3</sub>        | 1344-28-1  | 0.018975             | 575000  | Ceramic            |
|                                   |  | Silica-SiO <sub>2</sub>                       | 14808-60-7 | 0.000627             | 19000   | Ceramic            |
|                                   |  | Titanium oxide-TiO                            | 13463-67-7 | 0.000132             | 4000  | Ceramic            |
|                                   |  | Magnesia-MgO                                  | 1309-48-4  | 0.000099             | 3000  | Ceramic            |
|                                   |  | Calcia-CaO                                    | 1305-78-8  | 0.000099             | 3000  | Ceramic            |
|                                   |  | Chromium oxide-Cr <sub>2</sub> O <sub>3</sub> | 1308-38-9  | 0.001155             | 35000   | Ceramic            |
|                                   |  | Tungsten-W                                    | 7440-33-7  | 0.002376             | 72000   | Electric conductor |
|                                   |  | Molybdenum-Mo                                 | 7439-98-7  | 0.000066             | 2000  | Electric conductor |
|                                   |  | Silver-Ag                                     | 7440-22-4  | 0.000957             | 29000   | Brazing material   |
|                                   |  | Copper-Cu                                     | 7440-50-8  | 0.000363             | 11000   | Brazing material   |
|                                   |  | Iron-Fe                                       | 7439-89-6  | 0.003795             | 115000  | Kovar ring         |
|                                   |  | Nickel-Ni                                     | 7440-02-0  | 0.002046             | 62000   | Kovar ring         |
|                                   |  | Cobalt-Co                                     | 7440-48-4  | 0.001188             | 36000   | Kovar ring         |
|                                   |  | Nickel-Ni                                     | 7440-02-0  | 0.000594             | 18000   | Ni plating         |
| Cobalt-Co                         | 7440-48-4                                    | 0.000231                                      | 7000       | Ni plating           |   |                    |
| Gold-Au                           | 7440-57-5                                    | 0.000297                                      | 9000       | Au plating           |   |                    |
| LID                               | 0.023  | Iron-Fe                                       | 7439-89-6  | 0.0122429            | 532300  | Alloy              |
|                                   |  | Nickel-Ni                                     | 7440-02-0  | 0.0067827            | 294900  | Alloy              |
|                                   |  | Cobalt-Co                                     | 7440-48-4  | 0.0038548            | 167600  | Alloy              |
|                                   |  | Manganese-Mn                                  | 7439-96-5  | 0.0000897            | 3900  | Alloy              |
|                                   |  | Silicon-Si                                    | 7440-21-3  | 0.0000184            | 800   | Alloy              |
| Copper-Cu                         | 7440-50-8                                    | 0.0000115                                     | 500        | Alloy                |   |                    |
| Blank                             | 0.003  | Silica-SiO <sub>2</sub>                       | 14808-60-7 | 0.003                | 1000000   | Quartz crystal     |
| Silver                            | 0.013  | Silver-Ag                                     | 7440-22-4  | 0.012999116          | 999932  | Electrode          |
|                                   |  | Copper-Cu                                     | 7440-50-8  | 0.000000884          | 68  | Electrode          |
| Epoxy                             | 0.005  | Silver-Ag                                     | 7440-22-4  | 0.00425              | 850000  | Connect            |
|                                   |  | Silicone Resin                                | 67763-03-5 | 0.00075              | 150000  | Support            |