

# MATERIAL DECLARATION SHEET



|                 |                  |     |     |
|-----------------|------------------|-----|-----|
| Material Number | PWR247T-100-XXXX |     |     |
| Product Line    | Power Resistor   |     |     |
| Compliance Date | December 1, 2017 |     |     |
| RoHS Compliant  | Yes              | MSL | N/A |

| No. | Construction Element (Subpart) | Homogeneous Material   | Material Weight (g) | Homogeneous Material   | CASRN      | Material Mass % | Material Mass % of total unit wt. | Subpart mass of total wt. (%) |
|-----|--------------------------------|------------------------|---------------------|------------------------|------------|-----------------|-----------------------------------|-------------------------------|
|     |                                |                        |                     | Substance              |            |                 |                                   |                               |
| 1   | Housing                        | Epoxy Molding Compound | 2.409               | Silica                 | 14808-60-7 | 53              | 39.4                              | 74.29                         |
|     |                                |                        |                     | Epoxy resin            | 29690-82-2 | 25              | 18.6                              |                               |
|     |                                |                        |                     | Phenolic resin         | 9003-35-4  | 15              | 11.1                              |                               |
|     |                                |                        |                     | Antimony trioxide      | 1309-64-4  | 3               | 2.2                               |                               |
|     |                                |                        |                     | Brominated epoxy resin | 40039-93-8 | 3               | 2.2                               |                               |
| 2   | Terminals                      | Copper                 | 0.127               | Copper                 | 7440-50-8  | 99.999          | 3.902                             | 3.90                          |
|     |                                |                        |                     | Oxygen                 | 7782-44-7  | 0.001           | 0.00004                           |                               |
|     |                                | Plating                | 0.008               | Tin                    | 7440-31-5  | 100             | 0.249                             | 0.25                          |
| 3   | Substrate                      | Alumina                | 0.559               | Aluminum oxide         | 1344-28-1  | 88              | 15.1787                           | 17.25                         |
|     |                                |                        |                     | Manganese dioxide      | 1313-13-9  | 3.5             | 0.6037                            |                               |
|     |                                |                        |                     | Titanium dioxide       | 13463-67-7 | 3.5             | 0.6037                            |                               |
|     |                                |                        |                     | Chromium (III)oxide    | 1308-38-9  | 2.5             | 0.4312                            |                               |
|     |                                |                        |                     | Silicon dioxide        | 14808-60-7 | 2.5             | 0.4312                            |                               |
| 4   | Term Ink                       | Ink                    | 0.002               | Silver                 | 7440-22-4  | 93              | 0.0451                            | 0.05                          |
|     |                                |                        |                     | Bismuth                | 7440-69-9  | 2               | 0.0010                            |                               |
|     |                                |                        |                     | Lead Glass             | 7439-92-1  | 2               | 0.0010                            |                               |
|     |                                |                        |                     | Platinum               | 7440-06-4  | 2               | 0.0010                            |                               |
|     |                                |                        |                     | Copper                 | 7440-50-8  | 1               | 0.0005                            |                               |

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|              |                |                 |       |                                     |              |      |         |      |
|--------------|----------------|-----------------|-------|-------------------------------------|--------------|------|---------|------|
| 5            | Resistor Paste | Ink             | 0.004 | Palladium                           | 7440-05-3    | 33.4 | 0.04342 | 0.13 |
|              |                |                 |       | Boraluminosilicate glass            | 12788-79-3   | 40   | 0.052   |      |
|              |                |                 |       | Silver                              | 7440-22-4    | 20   | 0.026   |      |
|              |                |                 |       | Ruthenium dioxide                   | 12036-10-1   | 1.3  | 0.00169 |      |
|              |                |                 |       | Manganese                           | 7439-96-5    | 1.3  | 0.00169 |      |
|              |                |                 |       | Alumina                             | 1344-28-1    | 4    | 0.0052  |      |
| 6            | Encapsulant    | Ink             | 0.001 | Lead glass                          | 7439-92-1    | 58   | 0.0182  | 0.03 |
|              |                |                 |       | Glass without declarable substances | trade secret | 42   | 0.0132  |      |
| 7            | Solder paste   | Solder (M00572) | 0.133 | Tin                                 | 7440-31-5    | 84   | 3.4446  | 4.10 |
|              |                |                 |       | Rosin                               | 8050-09-7    | 5    | 0.2050  |      |
|              |                |                 |       | Silver                              | 7440-22-4    | 10   | 0.4101  |      |
|              |                |                 |       | Copper                              | 7440-50-8    | 1    | 0.0410  |      |
| Total Weight |                |                 | 3.243 |                                     |              |      |         |      |

**This Document was updated on: December 1, 2017**

**Important remarks:**

1. It is the responsibility of the user to verify they are accessing the latest version.