

# MATERIAL DECLARATION SHEET



|                 |                           |     |         |                                                                                     |
|-----------------|---------------------------|-----|---------|-------------------------------------------------------------------------------------|
| Material Number | PTVS3-058C-SH             |     |         |  |
| Product Line    | Semiconductor products    |     |         |                                                                                     |
| Compliance Date | May 30 <sup>th</sup> 2014 |     |         |                                                                                     |
| RoHS Compliant  | Yes                       | MSL | Level 1 |                                                                                     |

| No. | Construction Element (subpart) | Homogenous Material | Material Weight (g) | Homogenous Material/ Substances | CASRN if applicable | Materials Mass % | Material Mass % of total unit wt. | Subpart Mass % of total unit wt. |
|-----|--------------------------------|---------------------|---------------------|---------------------------------|---------------------|------------------|-----------------------------------|----------------------------------|
| 1   | Encapsulation                  | Epoxy Resin         | 0.139000            | Bisphenol Epoxy Resin           | 1675-54-3           | 40.00            | 4.08                              | 10.20                            |
|     |                                |                     |                     | Epoxy Resin                     | 25085-99-8          | 20.00            | 2.04                              |                                  |
|     |                                |                     |                     | Crystalline Silica              | 14464-46-1          | 23.00            | 2.35                              |                                  |
|     |                                |                     |                     | Brominated Epoxy Resin          | 40039-93-8          | 12.00            | 1.22                              |                                  |
|     |                                |                     |                     | Iron Oxide                      | 51274-00-1          | 2.00             | 0.20                              |                                  |
|     |                                |                     |                     | Titanium Oxide                  | 13463-67-7          | 3.00             | 0.31                              |                                  |
| 2   | Electrodes                     | Copper              | 0.600755            | Copper                          | 7440-50-8           | 99.10            | 43.70                             | 44.10                            |
|     |                                |                     |                     | Silver                          | 7440-22-4           | 0.40             | 0.18                              |                                  |
|     |                                |                     |                     | Other                           | -                   | 0.50             | 0.22                              |                                  |
| 3   | Terminations                   | Copper              | 0.446405            | Copper                          | 7440-50-8           | 99.50            | 32.60                             | 32.77                            |
|     |                                |                     |                     | Other                           | -                   | 0.50             | 0.16                              |                                  |
| 4   | Termination Finish             | Silver              | 0.005402            | Silver                          | 7440-22-4           | 100.00           | 0.40                              | 0.40                             |
| 5   | Chip                           | Silicon Die         | 0.050841            | Silicon                         | 7440-21-3           | 87.06            | 3.25                              | 3.73                             |
|     |                                |                     |                     | Aluminium                       | 7429-90-5           | 4.53             | 0.17                              |                                  |
|     |                                |                     |                     | Nickel                          | 7440-02-0           | 8.02             | 0.30                              |                                  |
|     |                                |                     |                     | Gold                            | 7440-57-5           | 0.39             | 0.01                              |                                  |
| 6   | Die Attach                     | Solder              | 0.046267            | Lead                            | 7439-92-1           | 92.50            | 3.14                              | 3.40                             |
|     |                                |                     |                     | Tin                             | 7440-31-5           | 5.00             | 0.17                              |                                  |
|     |                                |                     |                     | Silver                          | 7440-22-4           | 2.50             | 0.08                              |                                  |
| 7   | Die Coating                    | Silicone            | 0.073690            | Polysiloxane                    | 63148-62-9          | 22.11            | 1.20                              | 5.41                             |
|     |                                |                     |                     | Chromium Sesquioxide            | 1308-38-9           | 5.67             | 0.31                              |                                  |
|     |                                |                     |                     | Fumed Silica                    | 112945-52-5         | 11.11            | 0.60                              |                                  |
|     |                                |                     |                     | Filler                          | trade secret        | 61.11            | 3.31                              |                                  |
|     |                                | Total Weight        | 1.362360            |                                 |                     |                  |                                   |                                  |