



PK652 (v1.0) May 5, 2014

100% Material Declaration Data Sheet for 7 Series RF676 Package

Average Weight: 7.8847 g

| Component | Substance Description | CAS Number or Description | Percentage of Component | Use in Product | Component Weight/ Substance Weight (grams) | Component Percent of Total |
|--------------|--|---------------------------|-------------------------|--------------------|--|----------------------------|
| Silicon Die | | | | | 0.297103 | 3.768 |
| | Silicon | 7440-21-3 | 100.00 | Basis | 0.297103 | |
| Solder Bump | | | | | 0.014081 | 0.179 |
| | Tin | 7440-31-5 | 63.00 | Basis | 0.008871 | |
| | Lead | 7439-92-1 | 37.00 | Basis | 0.005210 | |
| Underfill | | | | | 0.045000 | 0.571 |
| | Bisphenol F/ Epichlorohydrin | 9003-36-5 | 20.00 | Basis | 0.009000 | |
| | Phenolic Resin | Trade Secret | 15.00 | Basis | 0.006750 | |
| | Bisphenol A type liquid epoxy resin | 25068-38-6 | 5.00 | Basis | 0.002250 | |
| | Amine type accelerator | Trade Secret | 5.00 | Basis | 0.002250 | |
| | Silicon Dioxide | 60676-86-0 | 51.50 | Basis | 0.023175 | |
| | Carbon Black | 1333-86-4 | 1.00 | Basis | 0.000450 | |
| | Additives | Trade Secret | 2.50 | Additive | 0.001125 | |
| Solder Paste | | | | | 0.005700 | 0.072 |
| | Tin | 7440-31-5 | 63.00 | Metal | 0.003591 | |
| | Lead | 7439-92-1 | 37.00 | Metal | 0.002109 | |
| Capacitor 1 | | | | | 0.021600 | 0.274 |
| | Barium | 12047-27-7 | 88.86 | Ceramic | 0.019193 | |
| | Manganese | 1313-13-9 | 1.43 | Ceramic | 0.000309 | |
| | Nickel | 7440-02-0 | 4.29 | Internal Electrode | 0.000926 | |
| | Copper | 7440-50-8 | 0.70 | Termination | 0.000151 | |
| | Boron | 1303-86-2 | 0.01 | Termination | 0.000003 | |
| | Nickel | 7440-02-0 | 3.57 | Plating | 0.000771 | |
| | Tin | 7440-31-5 | 0.90 | Plating | 0.000194 | |
| | Lead | 7439-92-1 | 0.24 | Plating | 0.000052 | |

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| Component | Substance Description | CAS Number or Description | Percentage of Component | Use in Product | Component Weight/ Substance Weight (grams) | Component Percent of Total |
|---------------------------|---|---------------------------|-------------------------|--------------------|--|----------------------------|
| Capacitor 2 | | | | | 0.003800 | 0.048 |
| | Barium | 12047-27-7 | 88.86 | Ceramic | 0.003377 | |
| | Manganese | 1313-13-9 | 1.43 | Ceramic | 0.000054 | |
| | Nickel | 7440-02-0 | 4.29 | Internal Electrode | 0.000163 | |
| | Copper | 7440-50-8 | 0.70 | Termination | 0.000027 | |
| | Glass Oxide | 65997-17-3 | 0.01 | Termination | 0.000001 | |
| | Nickel | 7440-02-0 | 3.57 | Plating | 0.000136 | |
| | Tin | 7440-31-5 | 0.86 | Plating | 0.000033 | |
| | Lead | 7439-92-1 | 0.29 | Plating | 0.000011 | |
| Capacitor 3 | | | | | 0.001200 | 0.015 |
| | Barium | 12047-27-7 | 71.29 | Ceramic | 0.000855 | |
| | Manganese | 1313-13-9 | 10.43 | Ceramic | 0.000125 | |
| | Nickel | 7440-02-0 | 2.00 | Internal Electrode | 0.000024 | |
| | Copper | 7440-50-8 | 11.57 | Termination | 0.000139 | |
| | Boron | 1303-86-2 | 0.21 | Termination | 0.000003 | |
| | Nickel | 7440-02-0 | 1.80 | Plating | 0.000022 | |
| | Gold | 7440-57-5 | 2.70 | Plating | 0.000032 | |
| Capacitor 4 | | | | | 0.007440 | 0.094 |
| | Barium | 12047-27-7 | 72.40 | Ceramic | 0.005387 | |
| | Manganese | 1313-13-9 | 10.60 | Ceramic | 0.000789 | |
| | Nickel | 7440-02-0 | 4.00 | Internal Electrode | 0.000298 | |
| | Copper | 7440-50-8 | 5.80 | Termination | 0.000432 | |
| | Glass Oxide | 65997-17-3 | 0.20 | Termination | 0.000015 | |
| | Nickel | 7440-02-0 | 2.66 | Plating | 0.000198 | |
| | Tin | 7440-31-5 | 3.99 | Plating | 0.000297 | |
| | Lead | 7439-92-1 | 0.35 | Plating | 0.000026 | |
| Heat Sink | | | | | 4.615000 | 58.531 |
| | Copper | 7440-50-8 | 99.15 | Main Material | 4.575773 | |
| | Nickel | 8049-31-8 | 0.85 | Main Material | 0.039228 | |
| Heat Sink Adhesive | | | | | 0.074000 | 0.939 |
| | Aluminium Oxide Al2O3 | 1344-28-1 | 70.00 | Main Material | 0.051800 | |
| | Dimethyl siloxane, dimethylvinyl-terminated | 68083-19-2 | 30.00 | Main Material | 0.022200 | |
| Solder Ball | | | | | 0.643415 | 8.160 |
| | Tin | 7440-31-5 | 63.00 | Main Material | 0.405351 | |
| | Lead | 7439-92-1 | 37.00 | Main Material | 0.238064 | |

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| Component | Substance Description | CAS Number or Description | Percentage of Component | Use in Product | Component Weight/ Substance Weight (grams) | Component Percent of Total |
|------------------|-----------------------|---------------------------|-------------------------|----------------|--|----------------------------------|
| Substrate | | | | | 2.156403 | 27.349 |
| | Copper | 7440-50-8 | 40.39 | | 0.871057 | |
| | Tin | 7440-31-5 | 0.85 | | 0.018421 | |
| | Lead | 7439-92-1 | 0.50 | | 0.010819 | |
| | BT Core | Trade Secret | 42.32 | | 0.912582 | |
| | ABF | Trade Secret | 13.74 | | 0.296319 | |
| | Solder Mask | Trade Secret | 2.19 | | 0.047205 | |

Revision History

The following table shows the revision history for this document.

| Date | Version | Description of Revisions |
|------------|---------|--------------------------|
| 05/05/2014 | 1.0 | Xilinx Initial Release |

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