



PK790 (v1.0) Apr 26, 2016

100% Material Declaration Data Sheet for RF1761

Average Weight : 30.2100 g

| Component | Substance Description | CAS # or Description | % of component | Use in product | Component weight / substance weight (in grams) | Component % of total |
|--------------------|---|----------------------|----------------|--------------------|---|----------------------|
| Silicon Die | | | | | 0.532613 | 1.763% |
| | Silicon | 7440-21-3 | 100.00 | basis | 0.532613 | |
| Bump | | | | | 0.026037 | 0.086% |
| | Consigned | | | | 0.026037 | |
| Underfill | | | | | 0.060000 | 0.199% |
| | Bisphenol F/ epichlorohydrin | 9003-36-5 | 20.00 | basis | 0.012000 | |
| | Phenolic resin | trade secret | 15.00 | basis | 0.009000 | |
| | Bisphenol A type liquid epoxy resin | 25068-38-6 | 5.00 | basis | 0.003000 | |
| | Amine type accelerator | trade secret | 5.00 | basis | 0.003000 | |
| | Silicon dioxide | 60676-86-0 | 51.50 | basis | 0.030900 | |
| | Carbon black | 1333-86-4 | 1.00 | basis | 0.000600 | |
| Additives | trade secret | 2.50 | Additive | 0.001500 | | |
| Solder paste | | | | | 0.009116 | 0.030% |
| | Tin | 7440-31-5 | 63.00 | metal | 0.005743 | |
| Capacitor 1 | | | | | 0.006880 | 0.023% |
| | Lead | 7439-92-1 | 37.00 | metal | 0.002125 | |
| | Barium | 12047-27-7 | 88.86 | Ceramic | 0.006113 | |
| | Manganese | 1313-13-9 | 1.43 | Ceramic | 0.000098 | |
| | Nickel | 7440-02-0 | 4.29 | Internal Electrode | 0.000295 | |
| | Copper | 7440-50-8 | 0.70 | Termination | 0.000048 | |
| | Boron | 1303-86-2 | 0.01 | Termination | 0.000001 | |
| | Nickel | 7440-02-0 | 3.57 | Plating | 0.000246 | |
| Tin | 7440-31-5 | 0.90 | Plating | 0.000062 | | |
| Capacitor 2 | | | | | 0.003800 | 0.013% |
| | Lead | 7439-92-1 | 0.24 | Plating | 0.000017 | |
| | 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 | | |
| Capacitor 3 | | | | | 0.000313 | 0.001% |
| | Lead | 7439-92-1 | 0.29 | Plating | 0.000011 | |
| | Barium | 12047-27-7 | 71.29 | Ceramic | 0.000223 | |
| | Manganese | 1313-13-9 | 10.43 | Ceramic | 0.000033 | |
| | Nickel | 7440-02-0 | 2.00 | Internal Electrode | 0.000006 | |
| | Copper | 7440-50-8 | 11.57 | Termination | 0.000036 | |
| Capacitor 4 | | | | | 0.000920 | 0.003% |
| | Boron | 1303-86-2 | 0.21 | Termination | 0.000001 | |
| | Nickel | 7440-02-0 | 1.80 | Plating | 0.000006 | |
| | Gold | 7440-57-5 | 2.70 | Plating | 0.000008 | |
| | Barium | 12047-27-7 | 72.40 | Ceramic | 0.000666 | |
| | Manganese | 1313-13-9 | 10.60 | Ceramic | 0.000098 | |
| | Nickel | 7440-02-0 | 4.00 | Internal Electrode | 0.000037 | |
| | Copper | 7440-50-8 | 5.80 | Termination | 0.000053 | |
| Glass oxide | 65997-17-3 | 0.20 | Termination | 0.000002 | | |
| Heat sink | | | | | 20.130000 | 66.634% |
| | Nickel | 7440-02-0 | 1.65 | Main material | 0.332145 | |
| Heat sink adhesive | | | | | 0.131000 | 0.434% |
| | Copper | 7440-50-8 | 98.35 | Main material | 19.797855 | |
| Solder ball | | | | | 0.091700 | 0.434% |
| | Aluminium Oxide Al2O3 | 1344-28-1 | 70.00 | Main material | 0.091700 | |
| Solder ball | | | | | 0.039300 | 5.545% |
| | Dimethyl siloxane, dimethylvinyl-terminated | 68083-19-2 | 30.00 | Main material | 0.039300 | |
| Substrate | | | | | 1.675163 | 25.270% |
| | Tin | 7440-31-5 | 63.00 | Main material | 1.055353 | |
| | Lead | 7439-92-1 | 37.00 | Main material | 0.619810 | |
| | Copper | 7440-50-8 | 36.96 | | 7.634158 | |
| | Tin | 7440-31-5 | 0.27 | | 3.029997 | |
| | Lead | 7439-92-1 | 0.16 | | 0.020612 | |
| Solder Mask | | | | | 0.012215 | 25.270% |
| | Core | N/A | 40.35 | | 0.012215 | |
| | ABF | N/A | 18.16 | | 3.080383 | |
| Solder Mask | | | | | 1.386363 | 25.270% |
| | Solder Mask | N/A | 1.38 | | 1.386363 | |
| Solder Mask | | | | | 0.105351 | 25.270% |
| | Solder Mask | N/A | 1.38 | | 0.105351 | |

Revision History

| Date | Version | Description of Revisions |
|-----------|---------|--------------------------|
| 4/26/2016 | 1.0 | Initial Xilinx release. |

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