



Apex Microtechnology Materials Substance Report

Model: SA03

Print Time: 9/19/2013 9:35:07 AM

RoHS Compliant: Yes

Lead Free: No

| Bonding Island Substances | Total Weight (g) |
|----------------------------------|-------------------------|
| Aluminum | 8.68E-3 |
| Copper | 6.76E-2 |

| Capacitor Substances | Total Weight (g) |
|-----------------------------|-------------------------|
| Barium Titanate | 2.22E-1 |
| Bismuth Titanate | 1.30E-2 |
| Calcium Zirconate | 1.30E-2 |
| Manganese Oxide | 1.30E-2 |
| Nickel | 2.61E-3 |
| Palladium | 2.45E-3 |
| Silica | 1.30E-2 |
| Silver | 4.65E-2 |
| Tin | 6.52E-4 |

| Die Substances | Total Weight (g) |
|-----------------------|-------------------------|
| Aluminum | 5.81E-4 |
| Chromium | 1.23E-4 |
| Epoxy | 1.54E-4 |
| Gold | 1.53E-4 |
| Nickel | 4.68E-4 |
| Silicon | 1.77E-1 |
| Silicon Nitride | 1.78E-8 |
| Silver | 5.52E-3 |
| Tin | 6.99E-2 |
| Titanium | 2.79E-6 |

| Encapsulant Substances | Total Weight (g) |
|-------------------------------|-------------------------|
| NONE | N/A |

| Frame Substances | Total Weight (g) |
|-------------------------|-------------------------|
| NONE | N/A |



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Header Substances

| | Total Weight (g) |
|--------------|-------------------------|
| Aluminum | 5.19E-3 |
| Barium Oxide | 1.80E-1 |
| Carbon | 3.65E-2 |
| Chromium | 5.19E-3 |
| Cobalt | 2.60E-2 |
| Iron | 3.62E+1 |
| Manganese | 1.70E-1 |
| Nickel | 2.62E+0 |
| Phosphorous | 1.50E-2 |
| Silica | 1.91E-1 |
| Silicon | 1.56E-2 |
| Sulfur | 2.00E-2 |

Lead Frame Substances

| | Total Weight (g) |
|------|-------------------------|
| NONE | N/A |

Lid Substances

| | Total Weight (g) |
|-----------|-------------------------|
| Carbon | 1.49E-2 |
| Copper | 2.48E-2 |
| Iron | 3.98E-2 |
| Manganese | 3.48E-2 |
| Nickel | 9.88E+0 |
| Silicon | 3.48E-2 |
| Sulfur | 9.94E-4 |

Pin Substances

| | Total Weight (g) |
|------|-------------------------|
| NONE | N/A |

Silicone Substances

| | Total Weight (g) |
|------|-------------------------|
| NONE | N/A |

Solder Substances

| | Total Weight (g) |
|--------|-------------------------|
| Silver | 2.19E-2 |
| Tin | 6.05E-1 |



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Substrate Substances

Beryllium Oxide

Total Weight (g)

2.67E+0

Thickfilm Substances

Cadmium Oxide

Glass

Gold

Lead Oxide

Silver

Total Weight (g)

3.61E-4

5.39E-2

1.13E-2

1.13E-3

9.52E-2

Wire Substances

Aluminum

Total Weight (g)

5.48E-3



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Substances Present in This Model

| Substance | Total Weight (g) |
|-------------------|------------------|
| Aluminum | 1.99E-2 |
| Barium Oxide | 1.80E-1 |
| Barium Titanate | 2.22E-1 |
| Beryllium Oxide | 2.67E+0 |
| Bismuth Titanate | 1.30E-2 |
| Cadmium Oxide | 3.61E-4 |
| Calcium Zirconate | 1.30E-2 |
| Carbon | 5.14E-2 |
| Chromium | 5.31E-3 |
| Cobalt | 2.60E-2 |
| Copper | 9.24E-2 |
| Epoxy | 1.54E-4 |
| Glass | 5.39E-2 |
| Gold | 1.15E-2 |
| Iron | 3.62E+1 |
| Lead Oxide | 1.13E-3 |
| Manganese | 2.05E-1 |
| Manganese Oxide | 1.30E-2 |
| Nickel | 1.25E+1 |
| Palladium | 2.45E-3 |
| Phosphorous | 1.50E-2 |
| Silica | 2.04E-1 |
| Silicon | 2.27E-1 |
| Silicon Nitride | 1.78E-8 |
| Silver | 1.69E-1 |
| Sulfur | 2.10E-2 |
| Tin | 6.76E-1 |
| Titanium | 2.79E-6 |

Sum of All Substances Present in This Model (g) 5.36E+1