



Apex Microtechnology Materials Substance Report

Model: PA119CE

Print Time: 9/19/2013 9:12:43 AM

RoHS Compliant: Yes

Lead Free: No

| Bonding Island Substances | Total Weight (g) |
|----------------------------------|-------------------------|
| NONE | N/A |
| Capacitor Substances | Total Weight (g) |
| Barium Titanate | 3.74E-2 |
| Bismuth Titanate | 2.20E-3 |
| Calcium Zirconate | 2.20E-3 |
| Manganese Oxide | 2.20E-3 |
| Nickel | 4.40E-4 |
| Palladium | 4.13E-4 |
| Silica | 2.20E-3 |
| Silver | 7.84E-3 |
| Tin | 1.10E-4 |
| Die Substances | Total Weight (g) |
| Aluminum | 7.29E-5 |
| Chromium | 2.33E-5 |
| Epoxy | 7.95E-5 |
| Gold | 3.93E-5 |
| Nickel | 1.30E-3 |
| Silicon | 2.51E-2 |
| Silver | 1.51E-3 |
| Tin | 7.73E-3 |
| 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 | 8.65E-4 |
| Barium Oxide | 1.26E-1 |
| Carbon | 1.10E-2 |
| Chromium | 8.65E-4 |
| Cobalt | 8.65E-4 |
| Iron | 1.09E+1 |
| Manganese | 4.85E-2 |
| Nickel | 4.38E-1 |
| Phosphorous | 4.46E-3 |
| Silica | 1.34E-1 |
| Silicon | 2.60E-3 |
| Sulfur | 5.28E-3 |

Lead Frame Substances

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

Lid Substances

| | Total Weight (g) |
|--------|-------------------------|
| Nickel | 1.86E+0 |

Pin Substances

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

Silicone Substances

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

Solder Substances

| | Total Weight (g) |
|--------|-------------------------|
| Silver | 3.57E-3 |
| Tin | 9.84E-2 |

Substrate Substances

| | Total Weight (g) |
|-----------------|-------------------------|
| Beryllium Oxide | 8.00E-1 |



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Thickfilm Substances

| | Total Weight (g) |
|---------------|------------------|
| Cadmium Oxide | 1.07E-4 |
| Glass | 1.59E-2 |
| Gold | 3.35E-3 |
| Lead Oxide | 2.75E-4 |
| Silver | 2.82E-2 |

Wire Substances

| | Total Weight (g) |
|----------|------------------|
| Aluminum | 4.59E-4 |

Substances Present in This Model

| Substance | Total Weight (g) |
|-------------------|------------------|
| Aluminum | 1.40E-3 |
| Barium Oxide | 1.26E-1 |
| Barium Titanate | 3.74E-2 |
| Beryllium Oxide | 8.00E-1 |
| Bismuth Titanate | 2.20E-3 |
| Cadmium Oxide | 1.07E-4 |
| Calcium Zirconate | 2.20E-3 |
| Carbon | 1.10E-2 |
| Chromium | 8.88E-4 |
| Cobalt | 8.65E-4 |
| Epoxy | 7.95E-5 |
| Glass | 1.59E-2 |
| Gold | 3.39E-3 |
| Iron | 1.09E+1 |
| Lead Oxide | 2.75E-4 |
| Manganese | 4.85E-2 |
| Manganese Oxide | 2.20E-3 |
| Nickel | 2.30E+0 |
| Palladium | 4.13E-4 |
| Phosphorous | 4.46E-3 |
| Silica | 1.36E-1 |
| Silicon | 2.77E-2 |
| Silver | 4.11E-2 |
| Sulfur | 5.28E-3 |
| Tin | 1.06E-1 |



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Sum of All Substances Present in This Model (g) 1.46E+1