



# Apex Microtechnology Materials Substance Report

**Model:** PA52

**Print Time:** 9/19/2013 9:19:54 AM

**RoHS Compliant:** Yes

**Lead Free:** No

<b>Bonding Island Substances</b>	<b>Total Weight (g)</b>
Aluminum	4.69E-3
Copper	3.05E-2

<b>Capacitor Substances</b>	<b>Total Weight (g)</b>
Barium Titanate	7.34E-2
Bismuth Titanate	4.32E-3
Calcium Zirconate	4.32E-3
Manganese Oxide	4.32E-3
Nickel	8.64E-4
Palladium	8.10E-4
Silica	4.32E-3
Silver	1.54E-2
Tin	2.16E-4

<b>Die Substances</b>	<b>Total Weight (g)</b>
Aluminum	5.17E-4
Chromium	1.29E-4
Epoxy	1.26E-4
Gold	7.36E-5
Nickel	5.08E-4
Silicon	1.77E-1
Silver	4.94E-3
Tin	6.68E-2
Titanium	1.21E-5

<b>Encapsulant Substances</b>	<b>Total Weight (g)</b>
NONE	N/A

<b>Frame Substances</b>	<b>Total Weight (g)</b>
NONE	N/A



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### Header Substances

	<b>Total Weight (g)</b>
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

	<b>Total Weight (g)</b>
NONE	N/A

### Lid Substances

	<b>Total Weight (g)</b>
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

	<b>Total Weight (g)</b>
NONE	N/A

### Silicone Substances

	<b>Total Weight (g)</b>
NONE	N/A

### Solder Substances

	<b>Total Weight (g)</b>
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

5.31E-2

1.13E-2

7.12E-4

9.52E-2

**Wire Substances**

Aluminum

**Total Weight (g)**

3.28E-3



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## Substances Present in This Model

Substance	Total Weight (g)
Aluminum	1.37E-2
Barium Oxide	1.80E-1
Barium Titanate	7.34E-2
Beryllium Oxide	2.67E+0
Bismuth Titanate	4.32E-3
Cadmium Oxide	3.61E-4
Calcium Zirconate	4.32E-3
Carbon	5.14E-2
Chromium	5.32E-3
Cobalt	2.60E-2
Copper	5.53E-2
Epoxy	1.26E-4
Glass	5.31E-2
Gold	1.14E-2
Iron	3.62E+1
Lead Oxide	7.12E-4
Manganese	2.05E-1
Manganese Oxide	4.32E-3
Nickel	1.25E+1
Palladium	8.10E-4
Phosphorous	1.50E-2
Silica	1.95E-1
Silicon	2.28E-1
Silver	1.37E-1
Sulfur	2.10E-2
Tin	6.72E-1
Titanium	1.21E-5

**Sum of All Substances Present in This Model (g)** 5.34E+1