



# Apex Microtechnology Materials Substance Report

**Model:** PA13

**Print Time:** 9/19/2013 9:15:59 AM

**RoHS Compliant:** Yes

**Lead Free:** No

<b>Bonding Island Substances</b>	<b>Total Weight (g)</b>
Aluminum	1.19E-3
Copper	1.67E-2

  

<b>Capacitor Substances</b>	<b>Total Weight (g)</b>
Barium Titanate	2.24E-2
Bismuth Titanate	1.32E-3
Calcium Zirconate	1.32E-3
Manganese Oxide	1.32E-3
Nickel	2.64E-4
Palladium	2.48E-4
Silica	1.32E-3
Silver	4.70E-3
Tin	6.60E-5

  

<b>Die Substances</b>	<b>Total Weight (g)</b>
Aluminum	1.57E-4
Epoxy	1.69E-5
Gold	7.52E-6
Silicon	3.97E-2
Silver	2.23E-3
Tin	2.08E-2

  

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

  

<b>Frame Substances</b>	<b>Total Weight (g)</b>
Epoxy	3.20E-2
Glass	9.20E-2
Polymeric Resin	2.16E-1



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**Header Substances**

	<b>Total Weight (g)</b>
Carbon	6.62E-3
Iron	6.58E+0
Manganese	2.72E-2
Nickel	5.78E-2
Phosphorous	2.65E-3
Sulfur	3.31E-3

**Lead Frame Substances**

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

**Lid Substances**

	<b>Total Weight (g)</b>
Glass	1.54E-1
Polymeric Resin	3.60E-1

**Pin Substances**

	<b>Total Weight (g)</b>
Copper	6.02E-1
Nickel	5.76E-3
Phosphorous	1.27E-3
Silver	3.49E-3
Tin	1.45E-1

**Silicone Substances**

	<b>Total Weight (g)</b>
Silicone	4.00E-1

**Solder Substances**

	<b>Total Weight (g)</b>
Silver	6.83E-3
Tin	1.88E-1

**Substrate Substances**

	<b>Total Weight (g)</b>
Beryllium Oxide	1.33E+0



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### Thickfilm Substances

	Total Weight (g)
Cadmium Oxide	2.14E-4
Glass	2.62E-2
Gold	5.57E-3
Lead Oxide	3.18E-4
Silver	4.69E-2

### Wire Substances

	Total Weight (g)
Aluminum	4.02E-4

### Substances Present in This Model

Substance	Total Weight (g)
Aluminum	1.75E-3
Barium Titanate	2.24E-2
Beryllium Oxide	1.33E+0
Bismuth Titanate	1.32E-3
Cadmium Oxide	2.14E-4
Calcium Zirconate	1.32E-3
Carbon	6.62E-3
Copper	6.19E-1
Epoxy	3.20E-2
Glass	2.72E-1
Gold	5.57E-3
Iron	6.58E+0
Lead Oxide	3.18E-4
Manganese	2.72E-2
Manganese Oxide	1.32E-3
Nickel	6.38E-2
Palladium	2.48E-4
Phosphorous	3.92E-3
Polymeric Resin	5.76E-1
Silica	1.32E-3
Silicon	3.97E-2
Silicone	4.00E-1
Silver	6.41E-2
Sulfur	3.31E-3
Tin	3.54E-1



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**Sum of All Substances Present in This Model (g)** 1.04E+1