



# Apex Microtechnology

## Materials Substance Report

**Model:** PA51M

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**RoHS Compliant:** No

**Lead Free:** No

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

  

<b>Capacitor Substances</b>	<b>Total Weight (g)</b>
Barium Titanate	1.50E-2
Bismuth Titanate	8.80E-4
Calcium Zirconate	8.80E-4
Gold	4.40E-5
Manganese Oxide	8.80E-4
Nickel	1.76E-4
Palladium	1.65E-4
Silica	8.80E-4
Silver	3.13E-3

  

<b>Die Substances</b>	<b>Total Weight (g)</b>
Aluminum	4.11E-4
Epoxy	6.49E-4
Gold	5.72E-4
Nickel	2.62E-4
Silicon	3.98E-2
Silver	9.76E-3
Tin	1.49E-3
Titanium	5.57E-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	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**

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

**Lid Substances**

	<b>Total Weight (g)</b>
Nickel	1.86E+0

**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>
Lead	2.30E-2
Silver	3.57E-3
Tin	1.38E-1

**Substrate Substances**

	<b>Total Weight (g)</b>
Beryllium Oxide	8.00E-1



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**Thickfilm Substances**

Cadmium Oxide  
Glass  
Gold  
Lead Oxide  
Silver

**Total Weight (g)**

1.07E-4  
7.70E-3  
3.35E-3  
8.11E-5  
2.82E-2

**Wire Substances**

Aluminum

**Total Weight (g)**

6.43E-4



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## Substances Present in This Model

Substance	Total Weight (g)
Aluminum	1.92E-3
Barium Oxide	1.26E-1
Barium Titanate	1.50E-2
Beryllium Oxide	8.00E-1
Bismuth Titanate	8.80E-4
Cadmium Oxide	1.07E-4
Calcium Zirconate	8.80E-4
Carbon	1.10E-2
Chromium	8.65E-4
Cobalt	8.65E-4
Epoxy	6.49E-4
Glass	7.70E-3
Gold	3.96E-3
Iron	1.09E+1
Lead	2.30E-2
Lead Oxide	8.11E-5
Manganese	4.85E-2
Manganese Oxide	8.80E-4
Nickel	2.30E+0
Palladium	1.65E-4
Phosphorous	4.46E-3
Silica	1.35E-1
Silicon	4.24E-2
Silver	4.47E-2
Sulfur	5.28E-3
Tin	1.39E-1
Titanium	5.57E-5

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