



Apex Microtechnology Materials Substance Report

Model: VRE310AS

Print Time: 9/19/2013 10:13:24 AM

RoHS Compliant: Yes

Lead Free: No

| | |
|----------------------------------|-------------------------|
| Bonding Island Substances | Total Weight (g) |
| NONE | N/A |
| Capacitor Substances | Total Weight (g) |
| NONE | N/A |
| Die Substances | Total Weight (g) |
| Aluminum | 6.28E-6 |
| Epoxy | 4.96E-5 |
| Gold | 3.38E-6 |
| Silicon | 1.76E-3 |
| Silver | 1.14E-4 |
| Encapsulant Substances | Total Weight (g) |
| NONE | N/A |
| Frame Substances | Total Weight (g) |
| NONE | N/A |
| Header Substances | Total Weight (g) |
| NONE | N/A |
| Lead Frame Substances | Total Weight (g) |
| NONE | N/A |
| Lid Substances | Total Weight (g) |
| Alumina | 2.42E-1 |
| Calcium Oxide | 1.30E-3 |
| Iron Oxide | 2.70E-3 |
| Manganese Oxide | 5.40E-3 |
| Silica | 8.10E-3 |
| Titanium Oxide | 9.40E-3 |



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Pin Substances

| | Total Weight (g) |
|-------------|-------------------------|
| Copper | 1.34E-1 |
| Lead | 3.52E-5 |
| Phosphorous | 2.80E-4 |
| Silver | 2.16E-4 |
| Tin | 1.76E-2 |
| Zinc | 2.16E-4 |

Silicone Substances

| | Total Weight (g) |
|----------------------------|-------------------------|
| Epoxy | 3.60E-2 |
| Magnesium Silicate Hydrous | 1.80E-2 |
| Silica | 1.80E-2 |

Solder Substances

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

Substrate Substances

| | Total Weight (g) |
|-----------------|-------------------------|
| Alumina | 2.18E-1 |
| Calcium Oxide | 1.20E-3 |
| Iron Oxide | 2.40E-3 |
| Manganese Oxide | 4.90E-3 |
| Silica | 7.30E-3 |
| Titanium Oxide | 8.50E-3 |

Thickfilm Substances

| | Total Weight (g) |
|---------------|-------------------------|
| Cadmium Oxide | 2.15E-5 |
| Glass | 2.69E-3 |
| Gold | 6.69E-4 |
| Lead Oxide | 5.29E-5 |
| Silver | 5.64E-3 |

Wire Substances

| | Total Weight (g) |
|------|-------------------------|
| Gold | 1.24E-4 |



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Substances Present in This Model

| Substance | Total Weight (g) |
|--|------------------|
| Alumina | 4.60E-1 |
| Aluminum | 6.28E-6 |
| Cadmium Oxide | 2.15E-5 |
| Calcium Oxide | 2.50E-3 |
| Copper | 1.34E-1 |
| Epoxy | 3.60E-2 |
| Glass | 2.69E-3 |
| Gold | 7.97E-4 |
| Iron Oxide | 5.10E-3 |
| Lead | 3.52E-5 |
| Lead Oxide | 5.29E-5 |
| Magnesium Silicate Hydrous | 1.80E-2 |
| Manganese Oxide | 1.03E-2 |
| Phosphorous | 2.80E-4 |
| Silica | 3.34E-2 |
| Silicon | 1.76E-3 |
| Silver | 5.97E-3 |
| Tin | 1.76E-2 |
| Titanium Oxide | 1.79E-2 |
| Zinc | 2.16E-4 |
| Sum of All Substances Present in This Model (g) | 7.47E-1 |