## * Material Composition - nRF52811-CAAA

| Material | Purpose | Substance Composition | CAS Number | Weight by mg | % weight of substance per Homogenous material | PPM | % weight of substance per package |
|---|---|---|---|---|---|---|---|
| **Polybenzoxazole1** | **Dielectric** | Proprietary | ---------- | 0.04501 | 100% | 7652 | 0.765% |
| **Polybenzoxazole2** | **Dielectric** | Proprietary | ---------- | 0.03835 | 100% | 6521 | 0.652% |
| **RDL Seed Layer** | **Seed Layer** | Ti | 7440-32-6 | 0.00031 | 3.93% | 52 | 0.005% |
| | **Seed Layer** | W | 7440-33-7 | 0.00275 | 35.40% | 468 | 0.047% |
| | **Seed Layer** | Cu | 7440-50-8 | 0.00472 | 60.67% | 802 | 0.080% |
| **Copper** | **Interconnect** | Cu | 7440-50-8 | 0.09433 | 100% | 16040 | 1.604% |
| **UBM Seed Layer** | **Seed Layer** | Ti | 7440-32-6 | 0.00014 | 3.93% | 24 | 0.002% |
| | **Seed Layer** | W | 7440-33-7 | 0.00125 | 35.40% | 212 | 0.021% |
| | **Seed Layer** | Cu | 7440-50-8 | 0.00214 | 60.67% | 364 | 0.036% |
| **Copper** | **UBM** | Cu | 7440-50-8 | 0.09629 | 100% | 16373 | 1.637% |
| **Solder Ball** | **Interconnect** | Sn | 7440-31-5 | 1.00848 | 95.50% | 171475 | 17.148% |
| | **Interconnect** | Ag | 7440-22-4 | 0.04224 | 4.00% | 7182 | 0.718% |
| | **Interconnect** | Cu | 7440-50-8 | 0.00528 | 0.50% | 898 | 0.090% |
| **Die** | **Circuit** | Si | 7440-21-3 | 4.31801 | 100% | 734206 | 73.421% |
| **Top Surface Laminate** | **Mark Surface** | Proprietary | ---------- | 0.22190 | 100% | 37731 | 3.773% |
| | | | **Package Weight (mg):** | **5.88** | | **% Total:** | **100%** |