

Material Declaration

Part Description	IoT System in Package	
Part Number	nRF9160-SIAA, nRF9160-SIBA, nRF9160-SICA	
Part Weight (mg): Measured	522.7	Calculated 522.7000000

Compliance Summary Declaration

RoHS Compliant?	Yes	Directive 2011/65/EU (RoHS Directive) and subsequent derogations
RoHS Exemptions?	Yes	7(c)-I/Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound;

Homogeneous Materials Summary

Subcomponent Description	Homogeneous Material Name	HM mass (mg)	Substance Name	Substance CAS No.	Substance %	Mass (mg)		
SAW Filter	Electrode Under Plating	0.00200	Nickel	7440-02-0	100.0000	0.00200000		
			Tin	7440-31-5	100.0000	0.00300000		
	Ceramic	0.43200	Copper oxide	1317-38-0	0.4000	0.00172800		
			Dsilver oxide	20667-12-3	0.5400	0.00233280		
			Magnesium oxide	1309-48-4	12.7000	0.05486400		
			Calcium oxide	1305-78-8	31.6000	0.13651200		
			Strontium titanium trioxide	12060-59-2	9.6800	0.04181760		
			Cobalt lithium oxide (CoLiO2)	12190-79-3	2.3000	0.00993600		
			Zinc oxide	1314-13-2	2.9000	0.01252800		
			Boron carbide	12069-32-8	0.7600	0.00328320		
			Aluminium oxide	1344-28-1	1.2200	0.00527040		
			Quartz (SiO2)	14808-60-7	37.9000	0.16372800		
			Marking	0.00100	Manganese dioxide	1313-13-9	100.0000	0.00100000
			Internal electrodes	0.04000	Silver	7440-22-4	100.0000	0.04000000
External electrodes	0.02000	Copper oxide	1317-38-0	3.2900	0.00065900			
		Silver	7440-22-4	89.4700	0.01789400			
		Glass Frit	Trade Secret	7.2400	0.00144800			
Filter	Electrode Under Plating	0.03000	Nickel	7440-02-0	100.0000	0.03000000		
			Tin	7440-31-5	100.0000	0.05700000		
	Ceramic	2.18700	Copper oxide	1317-38-0	0.4000	0.00874800		
			Dsilver oxide	20667-12-3	0.5400	0.01180980		
			Magnesium oxide	1309-48-4	12.7000	0.27774900		
			Calcium oxide	1305-78-8	31.6000	0.69109200		
			Strontium titanium trioxide	12060-59-2	9.6800	0.21170160		
			Cobalt lithium oxide (CoLiO2)	12190-79-3	2.3000	0.05030100		
			Zinc oxide	1314-13-2	2.9000	0.06342300		
			Boron carbide	12069-32-8	0.7600	0.01662120		
			Aluminium oxide	1344-28-1	1.2200	0.02668140		
			Quartz (SiO2)	14808-60-7	37.9000	0.82887300		
			Marking	0.00100	Manganese dioxide	1313-13-9	100.0000	0.00100000
			Internal electrodes	0.01800	Silver	7440-22-4	100.0000	0.01800000
External electrodes	0.15700	Copper oxide	1317-38-0	3.2900	0.00516530			
		Silver	7440-22-4	89.4700	0.14046790			
		Glass Frit	Trade Secret	7.2400	0.01136680			
Filter	Electrode Under Plating	0.03000	Nickel	7440-02-0	100.0000	0.03000000		
			Tin	7440-31-5	100.0000	0.05700000		
	Ceramic	2.18700	Copper oxide	1317-38-0	0.4000	0.00874800		
			Dsilver oxide	20667-12-3	0.5400	0.01180980		
			Magnesium oxide	1309-48-4	12.7000	0.27774900		
			Calcium oxide	1305-78-8	31.6000	0.69109200		
			Strontium titanium trioxide	12060-59-2	9.6800	0.21170160		
			Cobalt lithium oxide (CoLiO2)	12190-79-3	2.3000	0.05030100		
			Zinc oxide	1314-13-2	2.9000	0.06342300		

			Boron carbide	12069-32-8	0.7600	0.01662120
			Aluminium oxide	1344-28-1	1.2200	0.02668140
			Quartz (SiO2)	14808-60-7	37.9000	0.82887300
	Marking	0.00100	Manganese dioxide	1313-13-9	100.0000	0.00100000
	Internal electrodes	0.01800	Silver	7440-22-4	100.0000	0.01800000
	External electrodes	0.15700	Copper oxide	1317-38-0	3.2900	0.00516530
			Silver	7440-22-4	89.4700	0.14046790
			Glass Frit	Trade Secret	7.2400	0.01136680
Filter	Conductor	0.07480	Copper	7440-50-8	100.0000	0.07480000
	Dielectric	0.00070	Silicon Dioxide	12033-89-5	100.0000	0.00070000
	Insulator	0.00980	Poly(5,7-dihydro-1,3,5,7-tetraoxobenz[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)-	25036-53-7	100.0000	0.00980000
	Substrate	0.23470	Iron oxide (Fe2O3)	1309-37-1	100.0000	0.23470000
	Terminal Plating-Au	0.00020	Gold	7440-57-5	100.0000	0.00020000
	Terminal Plating-Ni	0.00410	Nickel	7440-02-0	100.0000	0.00410000
Capacitor	Ceramic BT-1	0.57800	Barium titanium trioxide	12047-27-7	100.0000	0.57800000
	Copper Termination	0.09000	Copper	7440-50-8	100.0000	0.09000000
	Internal Electrode (Nickel)	0.07200	Nickel	7440-02-0	100.0000	0.07200000
	Nickel plating	0.02700	Nickel	7440-02-0	100.0000	0.02700000
	Tin Plating	0.03300	Tin	7440-31-5	100.0000	0.03300000
Capacitor	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Inner Electrode	0.00200	Copper	7440-50-8	100.0000	0.00200000
	Ceramic	0.04800	Calcium oxide	1305-78-8	25.0000	0.01200000
			Zirconium oxide	1314-23-4	60.0000	0.02880000
			Manganese (II) Oxide	1344-43-0	5.0000	0.00240000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Ceramic	0.27000	Barium titanium trioxide	12047-27-7	100.0000	0.27000000
	Electrode Under Plating	0.00600	Copper	7440-50-8	100.0000	0.00600000
	Electrode Under Plating	0.00600	Nickel	7440-02-0	100.0000	0.00600000
	Electrode Finish Plating	0.01200	Tin	7440-31-5	100.0000	0.01200000
	Internal Electrode	0.06000	Nickel	7440-02-0	100.0000	0.06000000
	External Electrode	0.12600	Nickel	7440-02-0	100.0000	0.12600000
Capacitor	Outer Electrode	0.08000	Copper	7440-50-8	90.0000	0.07200000
			Diboron trioxide	1303-86-2	2.0000	0.00160000
			Silicon dioxide	7631-86-9	8.0000	0.00640000
	Inner Electrode	0.00900	Copper	7440-50-8	100.0000	0.00900000
	Ceramic	0.21400	Calcium oxide	1305-78-8	25.0000	0.05350000
			Zirconium oxide	1314-23-4	60.0000	0.12840000
			Manganese (II) Oxide	1344-43-0	5.0000	0.01070000
			Ceramic	Trade Secret	10.0000	0.02140000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.02000	Tin	7440-31-5	100.0000	0.02000000
Capacitor	Outer Electrode	0.08000	Copper	7440-50-8	90.0000	0.07200000
			Diboron trioxide	1303-86-2	2.0000	0.00160000
			Silicon dioxide	7631-86-9	8.0000	0.00640000
	Inner Electrode	0.00900	Copper	7440-50-8	100.0000	0.00900000
	Ceramic	0.21400	Calcium oxide	1305-78-8	25.0000	0.05350000
			Zirconium oxide	1314-23-4	60.0000	0.12840000
			Manganese (II) Oxide	1344-43-0	5.0000	0.01070000
			Ceramic	Trade Secret	10.0000	0.02140000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.02000	Tin	7440-31-5	100.0000	0.02000000
Capacitor	Ceramic BT-1	2.67000	Barium titanium trioxide	12047-27-7	100.0000	2.67000000
	Copper Termination	0.29100	Copper	7440-50-8	100.0000	0.29100000

	Internal Electrode (Nickel)	0.08600	Nickel	7440-02-0	100.0000	0.08600000
	Nickel plating	0.06700	Nickel	7440-02-0	100.0000	0.06700000
	Tin Plating	0.08600	Tin	7440-31-5	100.0000	0.08600000
Capacitor	Ceramic Powder-2	1.02000	Barium titanium trioxide	12047-27-7	98.7900	1.00765900
			Trade Secret	Trade Secret	1.2100	0.01234200
	Electro Plating-Ni-1	0.03000	Nickel	7440-02-0	100.0000	0.03000000
	Electro Plating-Sn-1	0.03000	Tin	7440-31-5	100.0000	0.03000000
	Inner Electrode-1	0.70000	Nickel	7440-02-0	100.0000	0.70000000
	Terminal Electrode-1	0.40000	Copper	7440-50-8	100.0000	0.40000000
Capacitor	Ceramic BT-1	0.23120	Barium titanium trioxide	12047-27-7	100.0000	0.23120000
	Copper Termination	0.03600	Copper	7440-50-8	100.0000	0.03600000
	Internal Electrode (Nickel)	0.02880	Nickel	7440-02-0	100.0000	0.02880000
	Nickel plating	0.01080	Nickel	7440-02-0	100.0000	0.01080000
	Tin Plating	0.01320	Tin	7440-31-5	100.0000	0.01320000
Capacitor	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Inner Electrode	0.00200	Copper	7440-50-8	100.0000	0.00200000
	Ceramic	0.04800	Calcium oxide	1305-78-8	25.0000	0.01200000
			Zirconium oxide	1314-23-4	60.0000	0.02880000
			Manganese (II) Oxide	1344-43-0	5.0000	0.00240000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Inner Electrode	0.00200	Nickel	7440-02-0	100.0000	0.00200000
	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Ceramic	0.04800	Calcium oxide	1305-78-8	40.0000	0.01920000
			Zirconium oxide	1314-23-4	50.0000	0.02400000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Inner Electrode	0.00200	Copper	7440-50-8	100.0000	0.00200000
	Ceramic	0.04800	Calcium oxide	1305-78-8	25.0000	0.01200000
			Zirconium oxide	1314-23-4	60.0000	0.02880000
			Manganese (II) Oxide	1344-43-0	5.0000	0.00240000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Inner Electrode	0.00200	Copper	7440-50-8	100.0000	0.00200000
	Ceramic	0.04800	Calcium oxide	1305-78-8	25.0000	0.01200000
			Zirconium oxide	1314-23-4	60.0000	0.02880000
			Manganese (II) Oxide	1344-43-0	5.0000	0.00240000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Ceramic	8.54700	Barium titanium trioxide	12047-27-7	100.0000	8.54700000
	Electrode Under Plating	0.09800	Copper	7440-50-8	100.0000	0.09800000
	Electrode Under Plating	0.09800	Nickel	7440-02-0	100.0000	0.09800000
	Electrode Finish Plating	0.12600	Tin	7440-31-5	100.0000	0.12600000
	Internal Electrode	0.72800	Nickel	7440-02-0	100.0000	0.72800000
	External Electrode	0.34300	Nickel	7440-02-0	100.0000	0.34300000
Capacitor	Inner Electrode	0.00200	Nickel	7440-02-0	100.0000	0.00200000
	Outer Electrode	0.03000	Copper	7440-50-8	90.0000	0.02700000
			Diboron trioxide	1303-86-2	2.0000	0.00060000
			Silicon dioxide	7631-86-9	8.0000	0.00240000
	Ceramic	0.04800	Calcium oxide	1305-78-8	40.0000	0.01920000
			Zirconium oxide	1314-23-4	50.0000	0.02400000
			Ceramic	Trade Secret	10.0000	0.00480000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000

	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Inner Electrode	0.00800	Nickel	7440-02-0	100.0000	0.00800000
	Outer Electrode	0.07600	Copper	7440-50-8	90.0000	0.06840000
			Diboron trioxide	1303-86-2	2.0000	0.00152000
			Silicon dioxide	7631-86-9	8.0000	0.00608000
	Ceramic	0.22000	Barium oxide, obtained by calcining witherite	1304-28-5	60.0000	0.13200000
			Titanium dioxide	13463-67-7	30.0000	0.06600000
			Ceramic	Trade Secret	10.0000	0.02200000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.01900	Tin	7440-31-5	100.0000	0.01900000
Capacitor	Outer Electrode	0.08000	Copper	7440-50-8	90.0000	0.07200000
			Diboron trioxide	1303-86-2	2.0000	0.00160000
			Silicon dioxide	7631-86-9	8.0000	0.00640000
	Inner Electrode	0.00900	Copper	7440-50-8	100.0000	0.00900000
	Ceramic	0.21400	Calcium oxide	1305-78-8	25.0000	0.05350000
			Zirconium oxide	1314-23-4	60.0000	0.12840000
			Manganese (II) Oxide	1344-43-0	5.0000	0.01070000
			Ceramic	Trade Secret	10.0000	0.02140000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.02000	Tin	7440-31-5	100.0000	0.02000000
Capacitor	Outer Electrode	0.08000	Copper	7440-50-8	90.0000	0.07200000
			Diboron trioxide	1303-86-2	2.0000	0.00160000
			Silicon dioxide	7631-86-9	8.0000	0.00640000
	Inner Electrode	0.00900	Copper	7440-50-8	100.0000	0.00900000
	Ceramic	0.21400	Calcium oxide	1305-78-8	25.0000	0.05350000
			Zirconium oxide	1314-23-4	60.0000	0.12840000
			Manganese (II) Oxide	1344-43-0	5.0000	0.01070000
			Ceramic	Trade Secret	10.0000	0.02140000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.02000	Tin	7440-31-5	100.0000	0.02000000
Capacitor	Ceramic	0.04500	Barium titanium trioxide	12047-27-7	100.0000	0.04500000
	Electrode Under Plating	0.00100	Copper	7440-50-8	100.0000	0.00100000
	Electrode Under Plating	0.00100	Nickel	7440-02-0	100.0000	0.00100000
	Electrode Finish Plating	0.00200	Tin	7440-31-5	100.0000	0.00200000
	External Electrode	0.02100	Nickel	7440-02-0	100.0000	0.02100000
	Internal Electrode	0.01000	Nickel	7440-02-0	100.0000	0.01000000
Capacitor	Ceramic	0.31500	Barium titanium trioxide	12047-27-7	100.0000	0.31500000
	Electrode Under Plating	0.00700	Copper	7440-50-8	100.0000	0.00700000
	Electrode Under Plating	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Electrode Finish Plating	0.01400	Tin	7440-31-5	100.0000	0.01400000
	Internal Electrode	0.07000	Nickel	7440-02-0	100.0000	0.07000000
	External Electrode	0.14700	Nickel	7440-02-0	100.0000	0.14700000
Capacitor	Outer Electrode	0.08000	Copper	7440-50-8	90.0000	0.07200000
			Diboron trioxide	1303-86-2	2.0000	0.00160000
			Silicon dioxide	7631-86-9	8.0000	0.00640000
	Inner Electrode	0.00900	Copper	7440-50-8	100.0000	0.00900000
	Ceramic	0.21400	Calcium oxide	1305-78-8	25.0000	0.05350000
			Zirconium oxide	1314-23-4	60.0000	0.12840000
			Manganese (II) Oxide	1344-43-0	5.0000	0.01070000
			Ceramic	Trade Secret	10.0000	0.02140000
	Nickel Plating Layer	0.00700	Nickel	7440-02-0	100.0000	0.00700000
	Tin Plating Layer	0.02000	Tin	7440-31-5	100.0000	0.02000000
Inductor	Coating	0.00160	Diboron trioxide	1303-86-2	15.0000	0.00024000
			Silicon dioxide	7631-86-9	70.0000	0.00112000
			Aluminium oxide	1344-28-1	5.0000	0.00008000
			Cobalt oxide	1307-96-6	5.0000	0.00008000
			Glass	Trade Secret	5.0000	0.00008000

	Electrode BA	0.00280	Silver	7440-22-4	100.0000	0.00280000
	Outer Electrode	0.00900	Diboron trioxide	1303-86-2	1.0000	0.00009000
			Silicon dioxide	7631-86-9	9.0000	0.00081000
			Silver	7440-22-4	90.0000	0.00810000
	Insulation Layer	0.03110	Aluminium oxide	1344-28-1	40.0000	0.01244000
			Diboron trioxide	1303-86-2	10.0000	0.00311000
			Silicon dioxide	7631-86-9	50.0000	0.01555000
	Nickel Plating Layer	0.00240	Nickel	7440-02-0	100.0000	0.00240000
	Tin Plating Layer	0.00310	Tin	7440-31-5	100.0000	0.00310000
Inductor	Coating	0.00160	Diboron trioxide	1303-86-2	15.0000	0.00024000
			Silicon dioxide	7631-86-9	70.0000	0.00112000
			Aluminium oxide	1344-28-1	5.0000	0.00008000
			Cobalt oxide	1307-96-6	5.0000	0.00008000
			Glass	Trade Secret	5.0000	0.00008000
	Electrode BA	0.00280	Silver	7440-22-4	100.0000	0.00280000
	Outer Electrode	0.00900	Diboron trioxide	1303-86-2	1.0000	0.00009000
			Silicon dioxide	7631-86-9	9.0000	0.00081000
			Silver	7440-22-4	90.0000	0.00810000
	Insulation Layer	0.03110	Aluminium oxide	1344-28-1	40.0000	0.01244000
			Diboron trioxide	1303-86-2	10.0000	0.00311000
			Silicon dioxide	7631-86-9	50.0000	0.01555000
	Nickel Plating Layer	0.00240	Nickel	7440-02-0	100.0000	0.00240000
	Tin Plating Layer	0.00310	Tin	7440-31-5	100.0000	0.00310000
Inductor	Coating	0.00160	Diboron trioxide	1303-86-2	15.0000	0.00024000
			Silicon dioxide	7631-86-9	70.0000	0.00112000
			Aluminium oxide	1344-28-1	5.0000	0.00008000
			Cobalt oxide	1307-96-6	5.0000	0.00008000
			Glass	Trade Secret	5.0000	0.00008000
	Electrode BA	0.00280	Silver	7440-22-4	100.0000	0.00280000
	Outer Electrode	0.00900	Diboron trioxide	1303-86-2	1.0000	0.00009000
			Silicon dioxide	7631-86-9	9.0000	0.00081000
			Silver	7440-22-4	90.0000	0.00810000
	Insulation Layer	0.03110	Aluminium oxide	1344-28-1	40.0000	0.01244000
			Diboron trioxide	1303-86-2	10.0000	0.00311000
			Silicon dioxide	7631-86-9	50.0000	0.01555000
	Nickel Plating Layer	0.00240	Nickel	7440-02-0	100.0000	0.00240000
	Tin Plating Layer	0.00310	Tin	7440-31-5	100.0000	0.00310000
Inductor	Electrode Under Plating	0.02700	Nickel	7440-02-0	100.0000	0.02700000
	Electrode Finish Plating	0.04800	Tin	7440-31-5	100.0000	0.04800000
	Marking/Black	0.00300	Glass Frit	Trade Secret	27.0000	0.00081000
			Tricobalt tetraoxide	1308-06-1	73.0000	0.00219000
	Glass	0.38400	Diboron trioxide	1303-86-2	10.5000	0.04032000
			Silicon dioxide	7631-86-9	52.7000	0.20236800
			Aluminium oxide	1344-28-1	35.0000	0.13440000
			Trade Secret	Trade Secret	1.8000	0.00691200
	External Electrode	0.06900	Glass Frit	Blank	6.8000	0.00469200
			Silver	7440-22-4	93.2000	0.06430800
	Internal Electrode	0.03300	Silver	7440-22-4	100.0000	0.03300000
Inductor	Coating	0.00550	Diboron trioxide	1303-86-2	15.0000	0.00082500
			Silicon dioxide	7631-86-9	70.0000	0.00385000
			Aluminium oxide	1344-28-1	5.0000	0.00027500
			Cobalt oxide	1307-96-6	5.0000	0.00027500
			Glass	Trade Secret	5.0000	0.00027500
	Electrode BA	0.01590	Silver	7440-22-4	100.0000	0.01590000
	Outer Electrode	0.02700	Diboron trioxide	1303-86-2	1.0000	0.00027000
			Silicon dioxide	7631-86-9	9.0000	0.00243000
			Silver	7440-22-4	90.0000	0.02430000

	Insulation Layer	0.10950	Aluminium oxide	1344-28-1	40.0000	0.04380000
			Diboron trioxide	1303-86-2	10.0000	0.01095000
			Silicon dioxide	7631-86-9	50.0000	0.05475000
	Nickel Plating Layer	0.00770	Nickel	7440-02-0	100.0000	0.00770000
	Tin Plating Layer	0.00940	Tin	7440-31-5	100.0000	0.00940000
Inductor	Electrode Under Plating	0.00900	Nickel	7440-02-0	100.0000	0.00900000
	Electrode Finish Plating	0.01600	Tin	7440-31-5	100.0000	0.01600000
	Marking Black	0.00100	Glass Frit	Trade Secret	27.0000	0.00027000
			Tricobalt tetraoxide	1308-06-1	73.0000	0.00073000
	Glass	0.12800	Diboron trioxide	1303-86-2	10.5000	0.01344000
			Silicon dioxide	7631-86-9	52.7000	0.06745600
			Aluminium oxide	1344-28-1	35.0000	0.04480000
			Trade Secret	Trade Secret	1.8000	0.00230400
	External Electrode	0.02300	Glass Frit	Blank	6.8000	0.00156400
			Silver	7440-22-4	93.2000	0.02143600
	Internal Electrode	0.01100	Silver	7440-22-4	100.0000	0.01100000
Inductor	Bottom Electrode H (G01257501)	0.00066	Silver	7440-22-4	94.2000	0.00062172
			Glass, oxide, chemicals	65997-17-3	5.8000	0.0003828
	Ceramic Material S (G03346800)	0.16180	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.16180000
	Inner Electrode	0.00304	Silver	7440-22-4	100.0000	0.00304000
	Inner Electrode	0.00080	Silver	7440-22-4	100.0000	0.00080000
	Mark Material CM (G05880500)	0.00380	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.00380000
	Ni Plating-2	0.00530	Nickel	7440-02-0	100.0000	0.00530000
	Sn Plating-2	0.00660	Tin	7440-31-5	100.0000	0.00660000
	Terminal Electrode DP (G01871700)	0.01800	Silver	7440-22-4	90.0000	0.01620000
			Glass Frit	65997-18-4	10.0000	0.00180000
Inductor	Bottom Electrode H (G01257501)	0.00066	Silver	7440-22-4	94.2000	0.00062172
			Glass, oxide, chemicals	65997-17-3	5.8000	0.0003828
	Ceramic Material S (G03346800)	0.16180	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.16180000
	Inner Electrode	0.00304	Silver	7440-22-4	100.0000	0.00304000
	Inner Electrode	0.00080	Silver	7440-22-4	100.0000	0.00080000
	Mark Material CM (G05880500)	0.00380	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.00380000
	Ni Plating-2	0.00530	Nickel	7440-02-0	100.0000	0.00530000
	Sn Plating-2	0.00660	Tin	7440-31-5	100.0000	0.00660000
	Terminal Electrode DP (G01871700)	0.01800	Silver	7440-22-4	90.0000	0.01620000
			Glass Frit	65997-18-4	10.0000	0.00180000
Inductor	Coating	0.00550	Diboron trioxide	1303-86-2	15.0000	0.00082500
			Silicon dioxide	7631-86-9	70.0000	0.00385000
			Aluminium oxide	1344-28-1	5.0000	0.00027500
			Cobalt oxide	1307-96-6	5.0000	0.00027500
			Glass	Trade Secret	5.0000	0.00027500
	Electrode BA	0.01590	Silver	7440-22-4	100.0000	0.01590000
	Outer Electrode	0.02700	Diboron trioxide	1303-86-2	1.0000	0.00027000
			Silicon dioxide	7631-86-9	9.0000	0.00243000
			Silver	7440-22-4	90.0000	0.02430000
	Insulation Layer	0.10950	Aluminium oxide	1344-28-1	40.0000	0.04380000
			Diboron trioxide	1303-86-2	10.0000	0.01095000
			Silicon dioxide	7631-86-9	50.0000	0.05475000
	Nickel Plating Layer	0.00770	Nickel	7440-02-0	100.0000	0.00770000
	Tin Plating Layer	0.00940	Tin	7440-31-5	100.0000	0.00940000
Inductor	Coating	0.00160	Diboron trioxide	1303-86-2	15.0000	0.00024000
			Silicon dioxide	7631-86-9	70.0000	0.00112000
			Aluminium oxide	1344-28-1	5.0000	0.00008000
			Cobalt oxide	1307-96-6	5.0000	0.00008000
			Glass	Trade Secret	5.0000	0.00008000
	Electrode BA	0.00280	Silver	7440-22-4	100.0000	0.00280000
	Outer Electrode	0.00900	Diboron trioxide	1303-86-2	1.0000	0.00009000

			Silicon dioxide	7631-86-9	9.0000	0.00081000
			Silver	7440-22-4	90.0000	0.00810000
	Insulation Layer	0.03110	Aluminium oxide	1344-28-1	40.0000	0.01244000
			Diboron trioxide	1303-86-2	10.0000	0.00311000
			Silicon dioxide	7631-86-9	50.0000	0.01555000
	Nickel Plating Layer	0.00240	Nickel	7440-02-0	100.0000	0.00240000
	Tin Plating Layer	0.00310	Tin	7440-31-5	100.0000	0.00310000
Inductor	Coating	0.00550	Diboron trioxide	1303-86-2	15.0000	0.00082500
			Silicon dioxide	7631-86-9	70.0000	0.00385000
			Aluminium oxide	1344-28-1	5.0000	0.00027500
			Cobalt oxide	1307-96-6	5.0000	0.00027500
			Glass	Trade Secret	5.0000	0.00027500
	Electrode BA	0.01590	Silver	7440-22-4	100.0000	0.01590000
	Outer Electrode	0.02700	Diboron trioxide	1303-86-2	1.0000	0.00027000
			Silicon dioxide	7631-86-9	9.0000	0.00243000
			Silver	7440-22-4	90.0000	0.02430000
	Insulation Layer	0.10950	Aluminium oxide	1344-28-1	40.0000	0.04380000
			Diboron trioxide	1303-86-2	10.0000	0.01095000
			Silicon dioxide	7631-86-9	50.0000	0.05475000
	Nickel Plating Layer	0.00770	Nickel	7440-02-0	100.0000	0.00770000
	Tin Plating Layer	0.00940	Tin	7440-31-5	100.0000	0.00940000
Inductor	Electrode Under Plating	0.01800	Nickel	7440-02-0	100.0000	0.01800000
	Electrode Finish Plating	0.03200	Tin	7440-31-5	100.0000	0.03200000
	Marking Black	0.00200	Glass Frit	Trade Secret	27.0000	0.00054000
			Tincobalt tetraoxide	1308-06-1	73.0000	0.00146000
	Glass	0.25600	Diboron trioxide	1303-86-2	10.5000	0.02688000
			Silicon dioxide	7631-86-9	52.7000	0.13491200
			Aluminium oxide	1344-28-1	35.0000	0.08960000
			Trade Secret	Trade Secret	1.8000	0.00460800
	External Electrode	0.04600	Glass Frit	Blank	6.8000	0.00312800
			Silver	7440-22-4	93.2000	0.04287200
	Internal Electrode	0.02200	Silver	7440-22-4	100.0000	0.02200000
Inductor	Coating	0.00320	Diboron trioxide	1303-86-2	15.0000	0.00048000
			Silicon dioxide	7631-86-9	70.0000	0.00224000
			Aluminium oxide	1344-28-1	5.0000	0.00016000
			Cobalt oxide	1307-96-6	5.0000	0.00016000
			Glass	Trade Secret	5.0000	0.00016000
	Electrode BA	0.00560	Silver	7440-22-4	100.0000	0.00560000
	Outer Electrode	0.01800	Diboron trioxide	1303-86-2	1.0000	0.00018000
			Silicon dioxide	7631-86-9	9.0000	0.00162000
			Silver	7440-22-4	90.0000	0.01620000
	Insulation Layer	0.06220	Aluminium oxide	1344-28-1	40.0000	0.02488000
			Diboron trioxide	1303-86-2	10.0000	0.00622000
			Silicon dioxide	7631-86-9	50.0000	0.03110000
	Nickel Plating Layer	0.00480	Nickel	7440-02-0	100.0000	0.00480000
	Tin Plating Layer	0.00620	Tin	7440-31-5	100.0000	0.00620000
Inductor	Ceramic Material S (G03346800)	0.05121	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.05120500
	Inner Electrode	0.00161	Silver	7440-22-4	100.0000	0.00161000
	Inner Electrode	0.00049	Silver	7440-22-4	100.0000	0.00049000
	Mark Material CM (G05880500)	0.00200	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.00199500
	Ni Plating-2	0.00280	Nickel	7440-02-0	100.0000	0.00280000
	Sn Plating-2	0.00350	Tin	7440-31-5	100.0000	0.00350000
	Terminal Electrode DP (G01871700)	0.00840	Silver	7440-22-4	90.0000	0.00756000
			Glass Frit	65997-18-4	10.0000	0.00084000
Inductor	Bottom Electrode H (G01257501)	0.00066	Silver	7440-22-4	94.2000	0.00062172
			Glass, oxide, chemicals	65997-17-3	5.8000	0.0003828
	Ceramic Material S (G03346800)	0.16180	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.16180000

	Inner Electrode	0.00304	Silver	7440-22-4	100.0000	0.00304000
	Inner Electrode	0.00080	Silver	7440-22-4	100.0000	0.00080000
	Mark Material CM (G05880500)	0.00380	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.00380000
	Ni Plating-2	0.00530	Nickel	7440-02-0	100.0000	0.00530000
	Sn Plating-2	0.00660	Tin	7440-31-5	100.0000	0.00660000
	Terminal Electrode DP (G01871700)	0.01800	Silver	7440-22-4	90.0000	0.01620000
			Glass Frit	65997-18-4	10.0000	0.00180000
Inductor	Ceramic	9.79000	Iron oxide (Fe2O3)	1309-37-1	70.6840	6.91996360
			Zinc oxide	1314-13-2	12.6660	1.24000140
			Nickel Oxide	1313-99-1	11.9510	1.17000290
			Copper oxide	1317-38-0	4.5970	0.45004630
			Tin dioxide	18282-10-5	0.1020	0.00998580
	Inner Electrode	0.30000	Silver	7440-22-4	100.0000	0.30000000
	Outer Electrode	0.37000	Silver	7440-22-4	100.0000	0.37000000
	Nickel Plating	0.12000	Nickel	7440-02-0	100.0000	0.12000000
	Tin Plating	0.22000	Tin	7440-31-5	100.0000	0.22000000
Inductor	Ceramic	29.37000	Iron oxide (Fe2O3)	1309-37-1	70.6840	20.75989080
			Zinc oxide	1314-13-2	12.6660	3.72000420
			Nickel Oxide	1313-99-1	11.9510	3.51000870
			Copper oxide	1317-38-0	4.5970	1.35013890
			Tin dioxide	18282-10-5	0.1020	0.02995740
	Inner Electrode	0.90000	Silver	7440-22-4	100.0000	0.90000000
	Outer Electrode	1.11000	Silver	7440-22-4	100.0000	1.11000000
	Nickel Plating	0.36000	Nickel	7440-02-0	100.0000	0.36000000
	Tin Plating	0.66000	Tin	7440-31-5	100.0000	0.66000000
Inductor	Bottom Electrode H (G01257501)	0.00132	Silver	7440-22-4	94.2000	0.00124344
			Glass, oxide, chemicals	65997-17-3	5.9000	0.00007656
	Ceramic Material S (G03346800)	0.32360	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.32360000
	Inner Electrode	0.00608	Silver	7440-22-4	100.0000	0.00608000
	Inner Electrode	0.00160	Silver	7440-22-4	100.0000	0.00160000
	Mark Material CM (G05880500)	0.00760	Sodium potassium aluminum silicate	66402-68-4	100.0000	0.00760000
	Ni Plating-2	0.01060	Nickel	7440-02-0	100.0000	0.01060000
	Sn Plating-2	0.01320	Tin	7440-31-5	100.0000	0.01320000
	Terminal Electrode DP (G01871700)	0.03600	Silver	7440-22-4	90.0000	0.03240000
			Glass Frit	65997-18-4	10.0000	0.00360000
Resistor	Bottom Terminal (SR4350)	0.00062	Silver	7440-22-4	100.0000	0.00061600
	Plating 1 (Ni)	0.00225	Nickel	7440-02-0	100.0000	0.00225400
	Plating 2 (Sn)	0.00252	Tin	7440-31-5	100.0000	0.00252350
	Protective Coating 1 (IG-9000) (GLP-40336)	0.00059	Diabismuth trioxide	1304-76-3	53.8390	0.00031663
			Silicon dioxide	7631-86-9	23.0780	0.00013572
			Aluminium oxide	1344-28-1	10.2610	0.00006034
			Zirconium oxide	1314-23-4	5.1300	0.00003017
			Barium oxide, obtained by calcining witherite	1304-28-5	3.8520	0.00002265
			Zinc oxide	1314-13-2	2.5620	0.00001507
			N29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32>-copper	147-14-8	1.2780	0.00000752
	Protective Coating 2 (5499A)	0.00103	Aluminium silicate	12141-46-7	53.8500	0.00055223
			Epichlorohydrin, o-cresol, formaldehyde polymer	29690-82-2	38.4600	0.00039441
			Carbon black	1333-86-4	7.6900	0.00007886
	Resistive Element (R-UW-SF)	0.00052	Lead (II) oxide	1317-36-8	19.3490	0.00010091
			Silicon dioxide	7631-86-9	19.3600	0.00010096
			Palladium	7440-05-3	12.9010	0.00006728
			Silver	7440-22-4	25.8030	0.00013456
			Trimanganese tetroxide	1317-35-7	1.2880	0.00000672
			Ruthenium oxide (RuO2)	12036-10-1	16.1300	0.00008412
			Aluminium oxide	1344-28-1	1.9410	0.00001012
			Zinc oxide	1314-13-2	1.2880	0.00000672
			Copper oxide	1317-38-0	0.6520	0.00000340

			Ditantalum pentoxide	1314-61-0	1.2880	0.0000672
	Side Terminal (NiCr)	0.00009	Nickel	7440-02-0	80.0000	0.00007000
			Chromium	7440-47-3	20.0000	0.00001750
	Substrate (Alumina Ceramics AS970)	0.02597	Aluminium oxide	1344-28-1	96.8000	0.02513538
			Magnesium oxide	1309-48-4	1.0000	0.00025966
			Quartz (SiO2)	14808-60-7	2.2000	0.00057126
	Upper Terminal 1 (CG-4010(K))	0.00065	Silver	7440-22-4	80.2700	0.00051983
			Palladium	7440-05-3	14.8100	0.00009591
			Silicon dioxide	7631-86-9	2.4600	0.00001593
			Zinc oxide	1314-13-2	1.2300	0.00000797
			Copper oxide	1317-38-0	1.2300	0.00000797
	Upper Terminal 2 (H9120A)	0.00077	Silver	7440-22-4	100.0000	0.00077000
Resistor	Ceramic Substrate	0.13950	Aluminium oxide	1344-28-1	96.0000	0.13920000
			Quartz (SiO2)	14808-60-7	3.0000	0.00418500
			Magnesium oxide	1309-48-4	1.0000	0.00199500
	Coating	0.00038	reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	25068-38-6	40.0000	0.00015000
			Carbon black	1333-86-4	5.0000	0.00001875
			Silica, vitreous	60676-86-0	35.0000	0.00013125
			Butyl carbitol	112-34-5	15.0000	0.00005625
			Talc	14807-96-6	5.0000	0.00001875
	Glass layer	0.00038	Glass Frit	65997-18-4	70.0000	0.00026250
			Cellulose, ethyl ether	9004-57-3	5.0000	0.00001875
			2-(2-butoxyethoxy)ethyl acetate	124-17-4	20.0000	0.00007500
			Butyl carbitol	112-34-5	5.0000	0.00001875
	Inner termination layer	0.00075	Silver	7440-22-4	70.0000	0.00052500
			Lead (II) oxide	1317-36-8	1.0000	0.00000750
			reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	25068-38-6	4.0000	0.00003000
			Butyl carbitol	112-34-5	20.0000	0.00015000
			Solvent naphtha (petroleum), medium aliph.	64742-88-7	5.0000	0.00003750
	Middle term (barrier) layer	0.00375	Nickel	7440-02-0	100.0000	0.00375000
	Outer termination layer	0.00450	Tin	7440-31-5	100.0000	0.00450000
	Resistive element	0.00075	Ruthenium oxide (RuO2)	12036-10-1	15.0000	0.00011250
			Lead (II) oxide	1317-36-8	50.0000	0.00037500
			Terpineol	8000-41-7	30.0000	0.00022500
			Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	5.0000	0.00003750
Thermistor	Electrode ZF (Thermistor)	0.02000	Silver	7440-22-4	89.3000	0.01786000
			Palladium	7440-05-3	4.7000	0.00094000
			Diboron trioxide	1303-86-2	1.5600	0.00031200
			Silicon dioxide	7631-86-9	4.4400	0.00088800
	Electrode ZI (Thermistor)	0.00600	Silver	7440-22-4	30.0000	0.00180000
			Palladium	7440-05-3	70.0000	0.00420000
	Nickel Plating Layer	0.00460	Nickel	7440-02-0	100.0000	0.00460000
	NTC Ceramic Body FA	0.20500	Iron oxide (Fe2O3)	1309-37-1	20.0000	0.04100000
			Manganese tetraoxide	1317-35-7	50.0000	0.10250000
			Nickel Oxide	1313-99-1	30.0000	0.06150000
	Tin Plating Layer	0.01140	Tin	7440-31-5	100.0000	0.01140000
Resistor	Ceramic Substrate	0.14880	Aluminium oxide	1344-28-1	96.0000	0.14284800
			Quartz (SiO2)	14808-60-7	3.0000	0.00446400
			Magnesium oxide	1309-48-4	1.0000	0.00148800
	Coating	0.00040	reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	25068-38-6	40.0000	0.00016000
			Carbon black	1333-86-4	5.0000	0.00002000
			Silica, vitreous	60676-86-0	35.0000	0.00014000
			Butyl carbitol	112-34-5	15.0000	0.00006000
			Talc	14807-96-6	5.0000	0.00002000
	Glass layer	0.00040	Glass Frit	65997-18-4	70.0000	0.00028000
			Cellulose, ethyl ether	9004-57-3	5.0000	0.00002000
			2-(2-butoxyethoxy)ethyl acetate	124-17-4	20.0000	0.00008000

			Butyl carbitol	112-34-5	5.0000	0.00002000
	Inner termination layer	0.00080	Silver	7440-22-4	70.0000	0.00056000
			Lead (II) oxide	1317-36-8	1.0000	0.00008000
			reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	4.0000	0.00003200
			Butyl carbitol	112-34-5	20.0000	0.00016000
			Solvent naphtha (petroleum), medium aliph.	64742-88-7	5.0000	0.00004000
	Middle term (barrier) layer	0.00400	Nickel	7440-02-0	100.0000	0.00400000
	Outer termination layer	0.00480	Tin	7440-31-5	100.0000	0.00480000
	Resistive element	0.00080	Ruthenium oxide (RuO2)	12036-10-1	15.0000	0.00012000
			Lead (II) oxide	1317-36-8	50.0000	0.00040000
			Terpineol	8000-41-7	30.0000	0.00024000
			Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	5.0000	0.00004000
Plated MicroShield	70570(Copper)	21.98200	Copper	7440-50-8	100.0000	21.98200000
	70570(Nickel)	3.64000	Nickel	7440-02-0	100.0000	3.64000000
Mold Compound	Mold Compound	269.18777	Silica, vitreous	60676-86-0	61.8240	166.4226878
			Phenol, polymer with formaldehyde	9003-35-4	3.0910	8.32059406
			Carbon black	1333-86-4	0.5670	1.52629467
			Epoxy Resins	Trade Secret	13.9100	37.44401922
			Silicon dioxide	7631-86-9	20.6080	55.47421626
Crystal	Base Au Plating	0.03000	Gold	7440-57-5	99.9980	0.02999940
			Thallium	7440-28-0	0.0020	0.00000060
	Base Ceramic	1.97000	Magnesium oxide	1309-48-4	0.5076	0.00999972
			Molybdenum Trioxide	1313-27-5	0.5076	0.00999972
			Manganese Oxide	1317-34-6	3.5533	0.07000001
			Aluminium oxide	1344-28-1	92.3858	1.82000026
			Quartz (SiO2)	14808-60-7	3.0457	0.06000029
	Base Metallization	0.38000	Molybdenum	7439-98-7	100.0000	0.38000000
	Base Ni-Co Plating	0.11000	Nickel	7440-02-0	80.0000	0.08800000
			Cobalt	7440-48-4	20.0000	0.02200000
	Cover Au Plating	0.00060	Gold	7440-57-5	100.0000	0.00060000
	Cover Brazing Metal	0.09160	Gold	7440-57-5	77.6200	0.07109992
			Tin	7440-31-5	22.3800	0.02050008
	Cover Ni Plating	0.06870	Nickel	7440-02-0	100.0000	0.06870000
	Evaporation Au	0.01700	Gold	7440-57-5	100.0000	0.01700000
	Evaporation Cr	0.00100	Chromium	7440-47-3	100.0000	0.00100000
	Cover - Kovar	0.67240	Iron	7439-89-6	53.6734	0.36089994
			Manganese	7439-96-5	0.2528	0.00169983
			Nickel	7440-02-0	29.6847	0.19959992
			Silicon	7440-21-3	0.0744	0.00050027
			Cobalt	7440-48-4	16.3147	0.10970004
	Electroconductive Adhesive	0.03835	Silver	7440-22-4	75.2500	0.02885838
			Silicon	7440-21-3	24.7500	0.00949163
	Epoxy Resin	0.18563	Silica, vitreous	60676-86-0	53.4600	0.09923513
			Trade Secret	Trade Secret	24.9200	0.04625775
			reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	10.0000	0.01856250
			Diallycidial Ether of Bisphenol A	9003-36-5	5.9800	0.01106325
			4,4'-BIS(2,3-EPOXYPROPOXY)-3,3',5,5'-TETRAMETHYLBIPHENYL	85954-11-6	3.9600	0.00735075
			Dibismuth trioxide	1304-76-3	1.2000	0.00222750
			Carbon black	1333-86-4	0.5000	0.00092813
	IC	0.12473	Silicon	7440-21-3	98.6144	0.12299977
			Aluminum	7429-90-5	0.7536	0.00093995
			Titanium	7440-32-6	0.3848	0.00047995
			Tungsten	7440-33-7	0.2325	0.00028999
			Arsenic	7440-38-2	0.0012	0.00000150
			Boron	7440-42-8	0.0002	0.00000025
			Copper	7440-50-8	0.0128	0.00001597
			Phosphorous	7723-14-0	0.0005	0.00000062

	IC Bump	0.00341	Gold	7440-57-5	98.8423	0.00337448
			Trade Secret	Trade Secret	0.8787	0.00003000
			Calcium	7440-70-2	0.1867	0.00000637
			Magnesium	7439-95-4	0.0593	0.00000202
			Iron	7439-89-6	0.0110	0.00000038
			Silver	7440-22-4	0.0110	0.00000038
			Copper	7440-50-8	0.0110	0.00000038
	Crystal	0.17700	Quartz (SiO2)	14808-60-7	100.0000	0.17700000
	Base Au Plating	0.02616	Gold	7440-57-5	99.9980	0.02616348
			Thallium	7440-28-0	0.0020	0.00000052
	Base Ceramic	0.79224	Magnesium oxide	1309-48-4	0.5076	0.00402143
			Molybdenum Trioxide	1313-27-5	0.5076	0.00402143
			Manganese Oxide	1317-34-6	3.5533	0.02815077
			Aluminium oxide	1344-28-1	92.3858	0.73192003
			Quartz (SiO2)	14808-60-7	3.0457	0.02412935
	Base Metallization	0.31951	Molybdenum	7439-98-7	100.0000	0.31951400
	Base Ni-Co Plating	0.09444	Nickel	7440-02-0	80.0000	0.07555040
			Cobalt	7440-48-4	20.0000	0.01888760
	Cover Ni Plating	0.06600	Nickel	7440-02-0	100.0000	0.06600000
	Evaporation Au	0.00677	Gold	7440-57-5	100.0000	0.00676800
	Evaporation Cr	0.00055	Chromium	7440-47-3	100.0000	0.00055200
	Base - Ag Solder	0.18565	Silver	7440-22-4	85.0000	0.15780335
			Copper	7440-50-8	15.0000	0.02784765
	Base - Kovar ring	0.37399	Iron	7439-89-6	54.0010	0.20195834
			Nickel	7440-02-0	28.9890	0.10841596
			Cobalt	7440-48-4	17.0100	0.06361570
	Cover - Kovar	0.70400	Aluminum	7429-90-5	0.0994	0.00069978
			Iron	7439-89-6	53.2954	0.37519962
			Magnesium	7439-95-4	0.0994	0.00069978
			Manganese	7439-96-5	0.4972	0.00350029
			Molybdenum	7439-98-7	0.1989	0.00140026
			Nickel	7440-02-0	29.0057	0.20420013
			Silicon	7440-21-3	0.1989	0.00140026
			Titanium	7440-32-6	0.0994	0.00069978
			Carbon	7440-44-0	0.0142	0.00009997
			Chromium	7440-47-3	0.1989	0.00140026
			Cobalt	7440-48-4	15.9943	0.11259987
			Copper	7440-50-8	0.1989	0.00140026
			Zirconium	7440-67-7	0.0994	0.00069978
	Electroconductive Adhesive	0.20000	Silver	7440-22-4	87.0000	0.17400000
			Silicon dioxide	7631-86-9	13.0000	0.02600000
	Crystal	0.08186	Quartz (SiO2)	14808-60-7	100.0000	0.08186100
	Microwave component	0.01400	Nickel	7440-02-0	100.0000	0.01400000
	Bumps	0.03600	Copper	7440-50-8	100.0000	0.03600000
	Code Mark	0.00600	Butyl hydroxyacetate	7397-62-8	100.0000	0.00600000
	Dielectric	0.00200	Colloidal Silica	112945-52-5	100.0000	0.00200000
	Isolation	0.00700	Tetraethylene glycol dimethacrylate	109-17-1	100.0000	0.00700000
	Pads	0.00500	Copper	7440-50-8	85.1291	0.00425646
			Tantalum	7440-25-7	11.6066	0.00058033
			Tantalum Mononitride	12033-62-4	3.2643	0.00016322
	Substrate	0.43900	Colloidal Silica	112945-52-5	66.7426	0.29300001
			Aluminium oxide	1344-28-1	32.1185	0.14100022
			Sodium Oxide	12401-86-4	1.1389	0.00499977
	Termination	0.01300	Tin	7440-31-5	100.0000	0.01300000
	IC	20.71797	Silicon	7440-21-3	100.0000	20.71797000
	Polymer	0.60777	Gamma-Butyrolactone	96-48-0	50.4900	0.30686307
			1-Methoxy-2-propyl acetate	108-65-6	5.0000	0.03038850

			Ethanol	64-17-5	0.5000	0.00303885
			1-Methyl-2-pyrrolidone	872-50-4	0.0100	0.00006078
			Trade Secret	Trade Secret	44.0000	0.26741880
	RDL Copper	1.38151	Copper	7440-50-8	100.0000	1.38151000
	RDL Titanium	0.01661	Titanium	7440-32-6	100.0000	0.01661000
	Solder Ball	2.52490	Tin	7440-31-5	95.5000	2.41127950
			Silver	7440-22-4	4.0000	0.10099600
			Copper	7440-50-8	0.5000	0.01262450
	UBM Copper	0.26603	Copper	7440-50-8	100.0000	0.26603000
	UBM Titanium	0.00164	Titanium	7440-32-6	100.0000	0.00164000
Purchased IC	Polyimide	0.23300	Trade Secret	Trade Secret	63.6400	0.14828120
			Ethyl lactate	97-64-3	27.2700	0.06353910
			Tetraethylene glycol dimethacrylate	109-17-1	9.0900	0.02117970
	UBM-Copper	0.01910	Copper	7440-50-8	100.0000	0.01910000
	UBM-Titanium	0.00023	Titanium	7440-32-6	100.0000	0.00023000
	Wafer Bumps	0.41900	Tin	7440-31-5	95.5000	0.40014500
			Silver	7440-22-4	4.0000	0.01676000
			Copper	7440-50-8	0.5000	0.00209500
	Chip	7.97000	Silicon	7440-21-3	100.0000	7.97000000
Purchased IC	Active Side Coating	0.03100	Benzocyclobutene	694-87-1	100.0000	0.03100000
	Back Side Coating	0.15267	Silica, vitreous	60676-86-0	78.1000	0.11923371
			4,4'-BIS(2,3-EPOXYPROPOXY)-3,3',5,5'-TETRAMETHYLBIPHENYL	85954-11-6	19.3000	0.02946492
			Trade Secret	Trade Secret	1.8000	0.00274802
			Carbon black	1333-86-4	0.8000	0.00122134
	Die	1.50523	Silicon	7440-21-3	100.0000	1.50522800
	Solder Bump	0.54173	Tin	7440-31-5	98.2500	0.53224874
			Silver	7440-22-4	1.2000	0.00650075
			Copper	7440-50-8	0.5000	0.00270865
			Nickel	7440-02-0	0.0500	0.00027086
Purchased IC	Polyimide	0.01710	Trade Secret	Trade Secret	100.0000	0.01710000
	UBM-Copper	0.00144	Copper	7440-50-8	100.0000	0.00144000
	UBM-Gold	0.00029	Gold	7440-57-5	100.0000	0.00028700
	UBM-Nickel	0.00053	Nickel	7440-02-0	100.0000	0.00052900
	UBM-Titanium	0.00002	Titanium	7440-32-6	100.0000	0.00002130
	UBM-Tungsten	0.00007	Tungsten	7440-33-7	100.0000	0.00007070
	Wafer Bumps	0.54500	Tin	7440-31-5	95.5000	0.52047500
			Silver	7440-22-4	3.9000	0.02125500
			Copper	7440-50-8	0.6000	0.00327000
	Chip	1.28600	Silicon	7440-21-3	100.0000	1.28600000
Capacitor	External Electrode	0.03500	Diboron trioxide	1303-86-2	1.0000	0.00035000
			Silicon dioxide	7631-86-9	9.0000	0.00315000
			Palladium	7440-05-3	27.0000	0.00945000
			Silver	7440-22-4	63.0000	0.02205000
	Internal Electrode	0.00300	Palladium	7440-05-3	100.0000	0.00300000
	Ceramic	0.04200	Barium oxide, obtained by calcining witherite	1304-28-5	15.0000	0.00630000
			Titanium dioxide	13463-67-7	30.0000	0.01260000
			Neodymium oxide	1313-97-9	45.0000	0.01890000
			Ceramic	Trade Secret	10.0000	0.00420000
	Nickel Plating Layer	0.00300	Nickel	7440-02-0	100.0000	0.00300000
	Tin Plating Layer	0.00700	Tin	7440-31-5	100.0000	0.00700000
Capacitor	Ceramic	0.10600	Calcium zirconium oxide (CaZrO3)	12013-47-7	100.0000	0.10600000
	Electrode Under Plating	0.00400	Copper	7440-50-8	100.0000	0.00400000
	Electrode Under Plating	0.00200	Nickel	7440-02-0	100.0000	0.00200000
	Electrode Finish Plating	0.00400	Tin	7440-31-5	100.0000	0.00400000
	External Electrode	0.02000	Nickel	7440-02-0	100.0000	0.02000000
	Internal Electrode	0.00800	Nickel	7440-02-0	100.0000	0.00800000
Resistor	Ceramic Substrate	0.03720	Aluminium oxide	1344-28-1	96.0000	0.03571200

			Quartz (SiO2)	14808-60-7	3.0000	0.00111600
			Magnesium oxide	1309-48-4	1.0000	0.00037200
	Coating	0.00010	reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	25068-38-6	40.0000	0.00004000
			Carbon black	1333-86-4	5.0000	0.00000500
			Silica, vitreous	60676-86-0	35.0000	0.00003500
			Butyl carbitol	112-34-5	15.0000	0.00001500
			Talc	14807-96-6	5.0000	0.00000500
	Glass layer	0.00010	Glass Frit	65997-19-4	70.0000	0.00007000
			Cellulose, ethyl ether	9004-57-3	5.0000	0.00000500
			2-(2-butoxyethoxy)ethyl acetate	124-17-4	20.0000	0.00002000
			Butyl carbitol	112-34-5	5.0000	0.00000500
	Inner termination layer	0.00020	Silver	7440-22-4	70.0000	0.00014000
			Lead (II) oxide	1317-36-8	1.0000	0.00000200
			reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	25068-38-6	4.0000	0.00000800
			Butyl carbitol	112-34-5	20.0000	0.00004000
			Solvent naphtha (petroleum), medium aliph.	64742-88-7	5.0000	0.00001000
	Middle term (barrier) layer	0.00100	Nickel	7440-02-0	100.0000	0.00100000
	Outer termination layer	0.00120	Tin	7440-31-5	100.0000	0.00120000
	Resistive element	0.00020	Ruthenium oxide (RuO2)	12036-10-1	15.0000	0.00003000
			Lead (II) oxide	1317-36-8	50.0000	0.00010000
			Terpineol	8000-41-7	30.0000	0.00006000
			Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	5.0000	0.00001000
Substrate	Copper Plating	70.11920	Copper	7440-50-8	100.0000	70.11920000
	Prepreg/Laminate	24.27260	1,1'-(Methylenedi-4,1-phenylene) bismaleimide	13676-54-5	12.5000	3.03407500
			Silica, vitreous	60676-86-0	12.5000	3.03407500
			Talc	14807-96-6	12.5000	3.03407500
			Glass, oxide, chemicals	65997-17-3	50.0000	12.13630000
			Filler/Pigment/Additives	Trade Secret	12.5000	3.03407500
	Gold Plating	0.00820	Gold	7440-57-5	100.0000	0.00820000
	Nickel Plating	0.03460	Nickel	7440-02-0	100.0000	0.03460000
	Palladium Plating	0.01250	Palladium	7440-05-3	100.0000	0.01250000
	Soldermask	3.06560	Barium sulphate	7727-43-7	29.1010	0.89212026
			Silicon dioxide	7631-86-9	0.5650	0.01732064
			Phthalocyanine Green	1328-53-6	0.5650	0.01732064
			Acrylate resin/Epoxy resin/Morpholine derivative	Trade Secret	65.2010	1.99880186
			Talc	14807-96-6	3.0340	0.09301030
			Dipropylene glycol methyl ether	34590-94-8	1.5340	0.04702630
CMOS Die	CMOS Die	0.81755	Silicon	7440-21-3	100.0000	0.81755000
Bump Material	Polyimide A	0.01073	Polyimide	Trade Secret	100.0000	0.01072500
	RDL Cu	0.01989	Copper	7440-50-8	100.0000	0.01989100
	Solder Cap	0.17638	Tin	7440-31-5	97.7000	0.17232033
			Silver	7440-22-4	2.3000	0.00405667
	Sputter Cu	0.00106	Copper	7440-50-8	100.0000	0.00106100
	Sputter Ti	0.00013	Titanium	7440-32-6	100.0000	0.00013300
	UBM Ni	0.00659	Nickel	7440-02-0	100.0000	0.00659200
CMOS Die	CMOS Die	0.87939	Silicon	7440-21-3	100.0000	0.87939000
Bump Material	RDL Cu	0.07962	Copper	7440-50-8	100.0000	0.07962000
	Solder Plating Ag	0.00072	Silver	7440-22-4	100.0000	0.00072400
	Solder Plating Sn	0.03618	Tin	7440-31-5	100.0000	0.03618200
	Sputter Cu	0.00053	Copper	7440-50-8	100.0000	0.00053100
	Sputter Ti	0.00009	Titanium	7440-32-6	100.0000	0.00009000
Solder Paste	Solder Paste	10.06493	Tin	7440-31-5	99.3000	9.99447549
			Copper	7440-50-8	0.7000	0.07045451