

# Material Declaration



Package Type	Half
Package Size	13.2 x 13.2 mm
Terminal Finish	Matte Tin
Finish Thickness	8 microns
Weight (mg)	2200.000
MSL	1

Series	CPP
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Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Stainless Steel	Nickel (Ni)	40.222	1.828%	7440-02-0	
		Chromium (Cr)	89.689	4.077%	7740-47-3	
		Iron (Fe)	354.004	16.091%	7439-89-6	
		Manganese (Mn)	5.114	0.232%	7439-96-5	
		Silicon (Si)	2.360	0.107%	7440-21-3	
		Carbon (C)	0.216	0.010%	7440-44-0	
		Sulphur (S)	0.005	0.000%	7704-34-9	
		Phosphorus (P)	0.103	0.005%	7723-14-0	
Header	Iron Alloy	Iron (Fe)	1350.727	61.397%	7439-89-6	
		Carbon (C)	0.676	0.031%	7440-44-0	
		Silicon (Si)	0.135	0.006%	7440-21-3	
		Manganese (Mn)	3.116	0.142%	7439-96-5	
		Phosphorus (P)	0.189	0.009%	7723-14-0	
		Sulphur (S)	0.068	0.003%	7704-34-9	
		PTH Glass	Glass Frit	8.236	0.374%	65997-18-4
		Standoff Glass	Glass Frit	28.765	1.308%	65997-18-4
	Kovar	Iron (Fe)	15.520	0.705%	7439-89-6	
		Nickel (Ni)	8.574	0.390%	7440-02-0	
		Cobalt (Co)	5.040	0.229%	7440-48-4	
	Solder Dip	Tin (Sn)	2.966	0.135%	7440-31-5	
		Silver (Ag)	0.092	0.004%	7440-22-4	
		Copper (Cu)	0.015	0.001%	7440-50-8	
	Cover	Kovar	Nickel (Ni)	6.774	0.308%	7440-02-0
Cobalt (Co)			3.943	0.179%	7440-48-4	
Iron (Fe)			12.666	0.576%	7439-89-6	
Base	Ceramic	Alumina (Al2O3)	86.460	3.930%	1344-28-1	
		Silicon Dioxide (SiO2)	3.436	0.156%	14808-60-7	
		Chromium Oxide (Cr2O3)	3.690	0.168%	1308-38-9	
		Titanium Oxide (TiO2)	0.958	0.044%	13463-67-7	
		Calcium Oxide (CaO)	0.330	0.015%	1305-79-9	
		Magnesium Oxide (MgO)	0.474	0.022%	1309-48-4	
		Tungsten (W)	13.107	0.596%	7440-33-7	
		Seal Ring	Nickel (Ni)	5.122	0.233%	7440-02-0
	Gold (Au)		0.584	0.027%	7440-57-5	
	Iron (Fe)		6.399	0.291%	7439-89-6	
	Silver Solder	Cobalt (Co)	2.434	0.111%	7440-48-4	
		Silver (Ag)	1.872	0.085%	7440-22-4	
	IC	IC	Copper (Cu)	0.330	0.015%	7440-50-8
			Aluminum (Al)	0.003	0.000%	7429-90-5
Titanium (Ti)			0.001	0.000%	7440-32-6	
Silicon (Si)			1.057	0.048%	7440-21-3	
Gold		Gold (Au)	0.316	0.014%	7440-57-5	
Adhesive		Silver (Ag)	0.00021	0.000%	7440-22-4	
Capacitor	Body	Nickel (Ni)	0.010	0.000%	7440-02-0	
		BaTiO3	0.830	0.038%	12047-27-7	
		Nickel (Ni)	0.013	0.001%	7440-02-0	
	Termination	Tin (Sn)	0.019	0.001%	7440-31-5	
		Copper (Cu)	0.025	0.001%	7440-50-8	
		Silicon (Si)	0.00014	0.000%	7440-21-3	
Crystal	Crystal	Silicon Dioxide (SiO2)	1.123	0.051%	14808-60-7	
		Silver (Ag)	0.021	0.001%	7440-22-4	
	Electrode	Nickel (Ni)	0.00018	0.000%	7440-02-0	
		Silver (Ag)	0.00041	0.000%	7440-22-4	
		Silicon (Si)	0.00014	0.000%	7440-21-3	
Circuit Board	FR-4	Phenol, 4,4'-(1-methylethylidene)bis(2,6-dibromo-polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis(phenoxy))	42.510	1.932%	26265-08-7	
		Copper (Cu)	23.187	1.054%	7440-50-8	
		GF-Fibre	63.121	2.869%		
		Copper Anode	Copper (Cu)	2.153	0.098%	7440-50-8
		Soldermask	Bisphenol A, epichlorohydrin polymer	0.358	0.016%	25068-38-6
	2-Methoxymethylethoxy)propanol		0.090	0.004%	34590-94-8	
	Barium sulphate		0.313	0.014%	7727-43-7	
	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one		0.090	0.004%	71868-10-5	
	ENIG	Dipropylene glycol ethyl ether	0.045	0.002%	15764-24-6	
		Nickel bis(sulphamate)	0.289	0.013%	13770-89-3	
		Gold (Au)	0.009	0.000%	7440-57-5	
		Total		2200.000	100.000%	



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