

Material Declaration



Package Type	5 x 7
Package Size	5 x 7 mm
Terminal Finish	Gold
Finish Thickness	0.5 microns
Weight (mg)	166.000
MSL	1

Series	CPPHVX
--------	--------

Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Kovar	Nickel (Ni)	7.048	4.246%	7440-02-0	
		Cobalt (Co)	4.103	2.472%	7440-48-4	
		Iron (Fe)	13.180	7.940%	7439-89-6	
	Plating	Nickel (Ni)	1.009	0.608%	7440-02-0	
Base	Ceramic	Alumina (Al ₂ O ₃)	79.996	48.190%	1344-28-1	
		Silicon Dioxide (SiO ₂)	3.175	1.912%	7631-86-9	
		Chromium Oxide (Cr ₂ O ₃)	3.415	2.057%	1308-38-9	
		Titanium Oxide (TiO ₂)	0.882	0.532%	13463-67-7	
		Calcium Oxide (CaO)	0.298	0.180%	1305-79-9	
		Magnesium Oxide (MgO)	0.447	0.269%	1309-48-4	
		Molybdenum (Mo)	0.493	0.297%	7439-98-7	
		Metallization	Tungsten (W)	15.816	9.528%	7440-33-7
	Nickel Plating	Nickel (Ni)	2.040	1.229%	7440-02-0	
		Cobalt (Co)	0.516	0.311%	7440-48-4	
	Gold Plating	Gold (Au)	0.711	0.428%	7440-57-5	
	Seal ring	Iron (Fe)	12.836	7.733%	7439-89-6	
		Nickel (Ni)	6.899	4.156%	7440-02-0	
	Silver solder	Cobalt (Co)	4.046	2.437%	7440-48-4	
		Silver (Ag)	3.014	1.816%	7440-22-4	
IC	IC	Copper (Cu)	0.527	0.318%	7440-50-8	
		Aluminum (Al)	0.003	0.00195%	7429-90-5	
		Titanium (Ti)	0.001	0.001%	7440-32-6	
		Silicon (Si)	1.215	0.732%	7440-21-3	
	Gold Wire	Gold (Au)	0.329	0.198%	7440-57-5	
	Adhesive	Silver (Ag)	0.0002	0.000130%	7440-22-4	
		Epoxy	0.0001	0.0000432%		
	Capacitor 1	Body	Nickel (Ni)	0.010	0.006%	7440-02-0
			BaTiO ₃	0.830	0.500%	12047-27-7
			Nickel (Ni)	0.013	0.008%	7440-02-0
Termination		Tin (Sn)	0.019	0.011%	7440-31-5	
		Copper (Cu)	0.025	0.015%	7440-50-8	
Capacitor 2	Body	Nickel (Ni)	0.010	0.006%	7440-02-0	
		BaTiO ₃	0.830	0.500%	12047-27-7	
		Nickel (Ni)	0.013	0.008%	7440-02-0	
	Termination	Tin (Sn)	0.019	0.011%	7440-31-5	
		Copper (Cu)	0.025	0.015%	7440-50-8	
Resistor	Body	Aluminum Oxide (Al ₂ O ₃)	0.849	0.511%	1344-28-1	
		Silicon Oxide (SiO ₂)	0.043	0.026%	7631-86-9	
		Magnesium Oxide (MgO)	0.010	0.006%	1309-48-4	
		Calcium Oxide (CaO)	0.009	0.005%	1305-78-8	
		Silver (Ag)	0.061	0.037%	7440-22-4	
		Palladium (Pd)	0.002	0.001%	7440-05-3	
		Boron Trioxide (B ₂ O ₃)	0.012	0.007%	1303-86-2	
		Lead Oxide (PbO)	0.010	0.006%	1317-36-8	
		Ruthenium Oxide (RuO ₂)	0.006	0.004%	12036-10-1	
		Copper Oxide (Cu ₂ O)	0.001	0.001%	1317-38-0	
		Epoxy	0.037	0.022%	67762-95-2	
		Termination	Nickel (Ni)	0.032	0.019%	7440-02-0
			Tin (Sn)	0.058	0.035%	7440-31-5
	Crystal	Crystal	Quartz (SiO ₂)	1.054	0.635%	14808-60-7
		Electrode	Silver (Ag)	0.022	0.013%	7440-22-4
Nickel (Ni)			0.0002	0.0001%	7440-02-0	
Adhesive		Silver (Ag)	0.0004	0.0003%	7440-22-4	
		Silicon (Si)	0.0001	0.0001%	7440-21-3	
Total			166.000	100.000%		



Cardinal Components, Inc.
145 Rt. 46 West
Wayne, NJ 07470

TEL: (973)785-1333
E-MAIL: sales@cardinalxtal.com
WEB: http://www.cardinalxtal.com