

# Material Declaration



Package Type	5 x 7
Package Size	5 x 7 mm
Terminal Finish	Gold
Finish Thickness	0.5 microns
Weight (mg)	168.000
MSL	1

Series	CAE
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Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Kovar	Nickel (Ni)	7.135	4.247%	7440-02-0	
		Cobalt (Co)	4.153	2.472%	7440-48-4	
		Iron (Fe)	13.342	7.941%	7439-89-6	
	Plating	Nickel (Ni)	1.021	0.608%	7440-02-0	
Base	Ceramic	Alumina (Al2O3)	80.977	48.201%	1344-28-1	
		Silicon Dioxide (SiO2)	3.214	1.913%	7631-86-9	
		Chromium Oxide (Cr2O3)	3.457	2.058%	1308-38-9	
		Titanium Oxide (TiO2)	0.893	0.532%	13463-67-7	
		Calcium Oxide (CaO)	0.302	0.180%	1305-79-9	
		Magnesium Oxide (MgO)	0.452	0.269%	1309-48-4	
		Molybdenum (Mo)	0.499	0.297%	7439-98-7	
	Metalization	Tungsten (W)	16.010	9.530%	7440-33-7	
	Nickel Plating	Nickel (Ni)	2.065	1.229%	7440-02-0	
		Cobalt (Co)	0.522	0.311%	7440-48-4	
	Gold Plating	Gold (Au)	0.719	0.428%	7440-57-5	
	Seal ring	Iron (Fe)	12.993	7.734%	7439-89-6	
		Nickel (Ni)	6.984	4.157%	7440-02-0	
		Cobalt (Co)	4.095	2.438%	7440-48-4	
	Silver solder	Silver (Ag)	3.051	1.816%	7440-22-4	
		Copper (Cu)	0.534	0.318%	7440-50-8	
IC	IC	Aluminum (Al)	0.003	0.00195%	7429-90-5	
		Titanium (Ti)	0.001	0.001%	7440-32-6	
		Silicon (Si)	1.230	0.732%	7440-21-3	
	Gold Wire	Gold (Au)	0.333	0.198%	7440-57-5	
	Adhesive	Silver (Ag)	0.0002	0.000130%	7440-22-4	
		Epoxy	0.0001	0.000043%		
Capacitor 1	Body	Nickel (Ni)	0.010	0.006%	7440-02-0	
		BaTiO3	0.830	0.494%	12047-27-7	
	Termination	Nickel (Ni)	0.013	0.008%	7440-02-0	
		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	
		BaTiO3	0.830	0.494%	12047-27-7	
	Termination	Nickel (Ni)	0.013	0.008%	7440-02-0	
		Tin (Sn)	0.019	0.011%	7440-31-5	
		Copper (Cu)	0.025	0.015%	7440-50-8	
Resistor	Body	Aluminum Oxide (Al2O3)	0.849	0.505%	1344-28-1	
		Silicon Oxide (SiO2)	0.043	0.025%	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	0.036%	7440-22-4	
		Palladium (Pd)	0.002	0.001%	7440-05-3	
		Boron Trioxide (B2O3)	0.012	0.007%	1303-86-2	
		Lead Oxide (PbO)	0.010	0.006%	1317-36-8	
		Ruthenium Oxide (RuO2)	0.006	0.004%	12036-10-1	
		Copper Oxide (Cu2O)	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
			Quartz (SiO2)	1.067	0.635%	14808-60-7
	Crystal	Electrode	Silver (Ag)	0.022	0.013%	7440-22-4
			Nickel (Ni)	0.0002	0.0001%	7440-02-0
		Adhesive	Silver (Ag)	0.0004	0.00026%	7440-22-4
Silicon (Si)			0.0001	0.000086%	7440-21-3	
<b>TOTAL</b>			<b>168.000</b>	<b>100.000%</b>		



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

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