

Material Declaration



Package Type	Full
Package Size	20.8 x 13.2 mm
Terminal Finish	Matte Tin
Finish Thickness	8 microns
Weight (mg)	3670.000
MSL	1

Series	C11
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Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Stainless Steel	Nickel (Ni)	64.902	1.768%	7440-02-0	
		Chromium (Cr)	144.720	3.943%	7740-47-3	
		Iron (Fe)	571.214	15.564%	7439-89-6	
		Manganese (Mn)	8.252	0.225%	7439-96-5	
		Silicon (Si)	3.808	0.104%	7440-21-3	
		Carbon (C)	0.349	0.010%	7440-44-0	
		Sulphur (S)	0.008	0.0002%	7704-34-9	
		Phosphorus (P)	0.167	0.005%	7723-14-0	
Header	Iron Alloy	Iron (Fe)	2179.510	59.387%	7439-89-6	
		Carbon (C)	1.091	0.030%	7440-44-0	
		Silicon (Si)	0.218	0.006%	7440-21-3	
		Manganese (Mn)	5.028	0.137%	7439-96-5	
		Phosphorus (P)	0.305	0.008%	7723-14-0	
		Sulphur (S)	0.109	0.003%	7704-34-9	
		PTH Glass	Glass Frit	13.290	0.362%	65997-18-4
		Standoff Glass	Glass Frit	46.415	1.265%	65997-18-4
	Kovar	Iron (Fe)	25.042	0.682%	7439-89-6	
		Nickel (Ni)	13.835	0.377%	7440-02-0	
		Cobalt (Co)	8.133	0.222%	7440-48-4	
	Solder Dip	Tin (Sn)	4.785	0.130%	7440-31-5	
		Silver (Ag)	0.149	0.004%	7440-22-4	
		Copper (Cu)	0.025	0.001%	7440-50-8	
H/I C	IC Die	Aluminum (Al)	0.0016	0.000043%	7429-90-5	
		Molybdenum (Mo)	0.0002	0.000005%	7439-98-7	
		Silicon (Si)	0.833	0.023%	7440-21-3	
		Titanium (Ti)	0.0004	0.00001%	7440-32-6	
		Arsenic (As)	0.0000081	0.00000022%	7440-38-2	
		Chromium (Cr)	0.00000073	0.00000002%	7440-47-3	
		Mold	Epoxy Resin	4.642	0.126%	129915-35-1
			Organic Phosphorus	0.413	0.011%	
	Metal Hydroxide		1.805	0.049%		
	Silica (SiO2)		40.948	1.116%	60676-86-0	
	Carbon Black		0.156	0.004%	1333-86-4	
	Phenol		3.640	0.099%	9003-35-4	
	Gold	Gold (Au)	0.139	0.004%	7440-57-5	
	Adhesive	Silver (Ag)	0.037	0.001%	7440-22-4	
		Epoxy Resin	0.012	0.0003%	129915-35-1	
	Leadframe	Copper (Cu)	18.373	0.501%	7440-50-8	
		Silver (Ag)	0.471	0.013%	7440-22-4	
	Leadframe Plating	Tin (Sn)	0.670	0.018%	7440-31-5	
		Silver (Ag)	0.017	0.0005%	7440-22-4	
	Ceramic Substrate	Alumina (Al2O3)	376.329	10.254%	1344-28-1	
		Silicon Oxide (SiO)	9.418	0.257%	11126-22-0	
		Titanium Oxide (TiO2)	0.040	0.001%	13463-67-7	
		Iron Oxide (Fe2O3)	0.237	0.006%	1309-37-1	
		Calcium Oxide (CaO)	1.428	0.039%	1305-78-9	
		Sodium Oxide (Na2O)	0.950	0.026%	1313-59-3	
		Magnesium Oxide (MgO)	3.719	0.101%	1309-48-4	
		Potassium Oxide (K2O)	3.166	0.086%	12136-45-7	
		Conductor	Silver (Ag)	5.901	0.161%	7440-22-4
			Glycol Ethyl Ether	0.347	0.009%	109-87-5
	Terpineol		0.347	0.009%	8000-41-7	
	Di(2-ethylhexyl) Phthala		0.069	0.002%	117-81-7	
	Conductor Overglaze	Resin, Hydrogenated, m	0.357	0.010%	8050-15-5	
		Glass Frit	9.283	0.253%	65997-18-4	
		Glycol Ethyl Ether	0.595	0.016%	109-87-5	
		Terpineol	1.071	0.029%	8000-41-7	
		Di(2-ethylhexyl) Phthala	0.476	0.013%	117-81-7	
	Chip Cap	Nickel (Ni)	0.119	0.003%	7440-02-0	
		Barium Titanate (BaTiO)	1.190	0.032%	12047-27-7	
		Nickel (Ni)	0.0024	0.00006%	7440-02-0	
		Copper (Cu)	0.0001	0.0000027%	7440-50-8	
		Nickel (Ni) (Plating)	0.0001	0.0000027%	7440-02-0	
	SMD Solder	Tin (Sn)	15.313	0.417%	7440-31-5	
		Silver (Ag)	0.555	0.015%	7440-22-4	
		Substrate attach solder	Tin (Sn)	19.141	0.522%	7440-31-5
	Blank Adhesive	Silver (Ag)	0.595	0.016%	7440-22-4	
		Copper (Cu)	0.099	0.003%	7440-50-8	
		Silicon Dioxide (SiO2)	39.671	1.081%	4808-60-7	
Electrode	Silver (Ag)	5.951	0.162%	7440-22-4		
	Silver (Ag)	8.093	0.221%	7440-22-4		
TOTAL	Silicon (Si)	2.023	0.055%	7440-21-3		
			3670.000	100.000%		



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

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