

Material Declaration



Package Type	5 x 7
Package Size	5 x 7 mm
Terminal Finish	Gold
Finish Thickness	0.5 microns
Weight (mg)	170.000
MSL	1

Series	CTX7
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Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Kovar	Nickel (Ni)	3.349	1.970%	7440-02-0	
		Cobalt (Co)	1.963	1.155%	7440-48-4	
		Iron (Fe)	6.237	3.669%	7439-89-6	
	Plating	Nickel (Ni)	0.385	0.226%	7440-02-0	
		Phosphorus (P)	0.000	0.000%	7723-14-0	
Crystal Base	Ceramic	Alumina (Al2O3)	32.646	19.204%	1344-28-1	
		Silicon Dioxide (SiO2)	2.040	1.200%	7631-86-9	
	Metallization	Tungsten (W)	3.571	2.100%	7440-33-7	
		Molybdenum (Mo)	1.020	0.600%	7439-98-7	
	Nickel Plate	Nickel (Ni)	1.107	0.651%	7440-02-0	
	Gold Plate	Gold (Au)	0.269	0.159%	7440-57-5	
	Kovar Ring	Nickel (Ni)	2.464	1.449%	7440-02-0	
		Cobalt (Co)	1.444	0.849%	7440-48-4	
		Iron (Fe)	4.591	2.701%	7439-89-6	
	Silver Solder	Silver (Ag)	1.530	0.900%	7440-22-4	
		Copper (Cu)	0.269	0.159%	7440-50-8	
	H/IC	IC	Aluminum (Al)	0.006	0.003%	7429-90-5
			Silicon (Si)	1.919	1.129%	7440-21-3
Wirebond		Gold (Au)	0.096	0.057%	7440-57-5	
		Ceramic Base	Alumina (Al2O3)	73.926	43.486%	1344-28-1
Silicon Dioxide (SiO2)			3.330	1.959%	7631-86-9	
Chromium Oxide (Cr2O3)			2.117	1.246%	1308-38-9	
Titanium Oxide (TiO2)			1.396	0.821%	13463-67-7	
Conductor		Tungsten (W)	4.552	2.678%	7440-33-7	
Nickel Plate		Nickel (Ni)	1.588	0.934%	7440-02-0	
Gold Plate		Gold (Au)	0.776	0.456%	7440-57-5	
Die bond Paste		Epoxy Resin	0.777	0.457%	80-05-7	
Sealing Resin		Bisphenol A Epoxy resin	0.183	0.108%	25068-38-6	
		Epoxy Resin	0.202	0.119%	2386-87-0	
		Acid anhydride curing agent	0.914	0.538%	25550-51-0	
		4-Methyltetrahydrophthalic anhydride	0.106	0.062%	34090-76-1	
		Silica, Amorphous(fumed)	0.385	0.226%	7631-86-9	
		Silica, Amorphous(fused)	2.984	1.755%	60676-86-0	
		Proprietary Resin	0.491	0.289%		
		Carbon Black	0.029	0.017%	1333-86-4	
Solder		Tin (Sn)	4.090	2.406%	7440-31-5	
		Antimony (Sb)	0.221	0.130%	7440-36-0	
Chip Capacitor(3)	Ceramic	Barium Titanate (BaTiO3)	3.523	2.072%	12047-27-7	
		Electrode	Nickel (Ni)	0.144	0.085%	7440-02-0
	Plating	Copper (Cu)	0.693	0.408%	7440-50-8	
		Nickel (Ni)	0.087	0.051%	7440-02-0	
		Tin (Sn)	0.173	0.102%	7440-31-5	
Crystal	Quartz	Silicon Dioxide (SiO2)	1.203	0.708%	14808-60-7	
	Electrode	Nickel (Ni)	0.002	0.001%	7440-02-0	
		Gold (Au)	0.238	0.140%	7440-57-5	
	Adhesive	Silver (Ag)	0.847	0.498%	7440-22-4	
		Silicone resin	0.115	0.068%		
TOTAL			170.000	100.000%		



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