

# Material Declaration



Package Type	Full
Package Size	20.8 x 13.2 mm
Terminal Finish	Matt Tin
Finish Thickness	8 microns
Weight (mg)	3760.000
MSL	1

Series	CTH11
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Item	Material	Element	Content (mg)	Content (wt%)	CAS #	
Cover	Stainless Steel	Nickel (Ni)	66.493	1.768%	7440-02-0	
		Chromium (Cr)	148.269	3.943%	7740-47-3	
		Iron (Fe)	585.222	15.564%	7439-89-6	
		Manganese (Mn)	8.454	0.225%	7439-96-5	
		Silicon (Si)	3.902	0.104%	7440-21-3	
		Carbon (C)	0.358	0.010%	7440-44-0	
		Sulphur (S)	0.008	0.0002%	7704-34-9	
		Phosphorus (P)	0.171	0.005%	7723-14-0	
Header	Iron Alloy	Iron (Fe)	2232.958	59.387%	7439-89-6	
		Carbon (C)	1.118	0.030%	7440-44-0	
		Silicon (Si)	0.224	0.006%	7440-21-3	
		Manganese (Mn)	5.152	0.137%	7439-96-5	
		Phosphorus (P)	0.313	0.008%	7723-14-0	
		Sulphur (S)	0.112	0.003%	7704-34-9	
	PTH Glass	Glass Frit	Glass Frit	13.616	0.362%	65997-18-4
			Glass Frit	47.553	1.265%	65997-18-4
	Standoff Glass	Glass Frit	Glass Frit	25.656	0.682%	7439-89-6
			Glass Frit	14.175	0.377%	7440-02-0
	Kovar	Iron (Fe)	Iron (Fe)	8.332	0.222%	7440-48-4
			Nickel (Ni)	4.903	0.130%	7440-31-5
			Silver (Ag)	0.152	0.004%	7440-22-4
	Solder Dip	Copper (Cu)	Copper (Cu)	0.025	0.001%	7440-50-8
			Aluminum (Al)	0.0016	0.000043%	7429-90-5
			Molybdenum (Mo)	0.0002	0.000005%	7439-98-7
	H/I/C	IC Die	Silicon (Si)	0.854	0.023%	7440-21-3
			Titanium (Ti)	0.0004	0.00001%	7440-32-6
Arsenic (As)			0.0000083	0.00000022%	7440-38-2	
Chromium (Cr)			0.00000075	0.00000002%	7440-47-3	
Epoxy Resin			4.755	0.126%	129915-35-1	
Organic Phosphorus			0.423	0.011%		
Mold		Metal Hydroxide	Metal Hydroxide	1.849	0.049%	
			Silica (SiO2)	41.953	1.116%	80676-86-0
			Carbon Black	0.160	0.004%	1333-86-4
			Phenol	3.729	0.099%	9003-38-4
Gold		Gold (Au)	Gold (Au)	0.142	0.004%	7440-57-5
			Silver (Ag)	0.038	0.001%	7440-22-4
Adhesive		Epoxy Resin	Epoxy Resin	0.012	0.0003%	129915-35-1
			Copper (Cu)	18.823	0.501%	7440-50-8
Leadframe		Silver (Ag)	Silver (Ag)	0.483	0.013%	7440-22-4
			Tin (Sn)	0.687	0.018%	7440-31-5
Leadframe Plating		Silver (Ag)	Silver (Ag)	0.017	0.0005%	7440-22-4
			Alumina (Al2O3)	385.558	10.254%	1344-28-1
Ceramic Substrate		Silicon Oxide (SiO)	Silicon Oxide (SiO)	9.649	0.257%	11126-22-0
			Titanium Oxide (TiO2)	0.041	0.001%	13463-67-7
			Iron Oxide (Fe2O3)	0.243	0.006%	1309-37-1
			Calcium Oxide (CaO)	1.463	0.039%	1305-78-9
			Sodium Oxide (Na2O)	0.973	0.026%	1313-59-3
			Magnesium Oxide (MgO)	3.810	0.101%	1309-48-4
			Potassium Oxide (K2O)	3.243	0.086%	12136-45-7
			Silver (Ag)	6.046	0.161%	7440-22-4
Conductor		Glycol Ethyl Ether	Glycol Ethyl Ether	0.356	0.009%	109-87-5
			Terpineol	0.356	0.009%	8000-41-7
			Di(2-ethylhexyl) Phthalate	0.071	0.002%	117-81-7
			Resin, Hydrogenated, methy ester	0.366	0.010%	8050-15-5
Conductor Overglaze		Glass Frit	Glass Frit	9.511	0.253%	65997-18-4
			Glycol Ethyl Ether	0.610	0.016%	109-87-5
			Terpineol	1.097	0.029%	8000-41-7
			Di(2-ethylhexyl) Phthalate	0.488	0.013%	117-81-7
Chip Cap		Nickel (Ni)	Nickel (Ni)	0.122	0.003%	7440-02-0
			Barium Titanate (BaTiO3)	1.219	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	
	Tin (Sn) (Plating)		0.0001	0.0000027%	7440-31-5	
SMD Solder	Tin (Sn)	Tin (Sn)	15.689	0.417%	7440-31-5	
		Silver (Ag)	0.569	0.015%	7440-22-4	
Substrate attach solder	Tin (Sn)	Tin (Sn)	19.611	0.522%	7440-31-5	
		Silver (Ag)	0.610	0.016%	7440-22-4	
		Copper (Cu)	0.102	0.003%	7440-50-8	
		Silicon Dioxide (SiO2)	40.644	1.081%	14808-60-7	
Crystal	Electrode	Silver (Ag)	6.097	0.162%	7440-22-4	
		Silver (Ag)	8.291	0.221%	7440-22-4	
		Silicon (Si)	2.073	0.055%	7440-21-3	
<b>TOTAL</b>			<b>3760.000</b>	<b>100.000%</b>		



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