

LTM9004 204LD 22mm X 15mm X 2.91mm (TABLE OF MATERIAL DECLARATION)

The LTM9004 is RoHS compliant per EU RoHS Directive 2003/95/EC.

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

No.	Part Name	Material Name	Component Weight (gram)	Materials Analysis (element)	CAS Number	Material Mass (gram)	Materials Analysis (weight %)
1	Substrate	Circuit Board	0.43054	Acrylic Resin	non-disclosure	0.0092	2.13
				Phthalcyanine Blue, Organic Pigment	non-disclosure	0.0001	0.02
				Barium Sulfate	7727-43-7	0.0047	1.09
				Silica	14808-60-7	0.0023	0.54
				Talc	non-disclosure	0.0023	0.54
				Aromatic Carbony Compound	non-disclosure	0.0009	0.21
				Amine Compound	non-disclosure	0.0001	0.03
				Levelling Agents & Others	non-disclosure	0.0006	0.13
				Dipropylene Glyco Monomethy Ether	34590948	0.0033	0.77
				3-Methoxy-3-Methyl Butyl-Acetate	non-disclosure	0.0051	1.19
				High Bopling Point Petroleum Solvent	non-disclosure	0.0009	0.20
				Acrylic Monomer	non-disclosure	0.0014	0.33
				Epoxy Resin	85954-11-6	0.0048	1.12
				Organic Filler	non-disclosure	0.0005	0.11
				Continuos Filament Fiber Glass	65997-17-3	0.0527	12.24
				Copper	7440-50-8	0.2340	54.35
				Bismaleimide/Triazine	105391-33-1 /25722-66-1	0.0220	5.10
				Epoxy Resin	9003-36-5	0.0220	5.10
				Inorganic Filler	21645-51-2	0.0404	9.38
				Triazine	25722-66-1	0.0211	4.89
2	Solder Paste	Alloy	0.03625	Nickel Plating	7440-02-0	0.0018	0.41
				Soft Gold	7440-57-5	0.0004	0.09
				Sn	7440-31-5	0.0344	95.00
3	Epoxy		0.00117	Sb	7440-36-0	0.0018	5.00
				Di-ester resin	non-disclosure	0.0001	8.00
				Functionalized ester	non-disclosure	0.0001	8.00
4	Passive Components	Resistor	0.01481	Silver	7440-22-4	0.0010	84.00
				Conductor/Resistor Glass	non-disclosure	0.0004	2.58
				Epoxy	non-disclosure	0.0002	1.31
				Nickel (Ni)	7440-02-0	0.0004	2.55
				Tin (Sn)	7440-31-5	0.0003	2.02
5	Passive	Capacitor	0.00078	Ceramic (Oxides)	1344-28-1	0.0136	91.54
				Copper (Cu)	7440-50-8	0.0002	32.00

No.	Part Name	Material Name	Component Weight (gram)	Materials Analysis (element)	CAS Number	Material Mass (gram)	Materials Analysis (weight %)
	Components			Nickel (Ni)	7440-02-0	0.0001	8.00
				Tin (Sn)	7440-31-5	0.0000	2.40
				Ceramic (Ba) Compounds	12047-27-7	0.0004	57.60
6	Passive Components	inductor	0.11986	Iron Powder (Fe)	7439-89-6	0.0963	80.38
				Copper (Cu)	7440-50-8	0.0227	18.91
				Nickel (Ni)	7440-02-0	0.0001	0.10
				Tin (Sn)	7440-31-5	0.0007	0.62
7	Active Components	LTC-QFN	0.03640	MDS attached	-	0.0364	100.00
8	Active Ics	Silicon	0.00664	Silicon	7440-21-3	0.0066	100.00
9	Wire	Gold	0.00237	Au	7440-57-5	0.0024	99.99
10	Encapsulation	Epoxy Resin	1.53236	Fused Silica	60676-86-0	1.1830	77.20
				Epoxy Resin	non-disclosure	0.1364	8.90
				Phenol Resin	non-disclosure	0.1364	8.90
				Crytalline Silica	14808-60-7	0.0460	3.00
				Carbon Black	1333-86-4	0.0077	0.50
				Metal Hydroxide	non-disclosure	0.0230	1.50
Total Package Weight			2.18				

Note: Composition derived from MSDS and material C of C from Vendors. Component Weight based on assembly of generic part

* MDS for LTC-QFN is attached on Page 2

LINEAR TECHNOLOGY MATERIALS DECLARATION

LT5575EUF

(Engineering Calculation)

QFN 4mm X 4mm Exp. Pad

(printed on: 2013-01-08 14:33:48)

TOTAL MASS (g): 0.0364019982517

COMPONENT MATERIAL	VENDOR/ INDUSTRY NAMES	CONSTITUENT NAME	CAS NUMBER	CONSTITUENT MASS (g)	CONSTITUENT (PPM) OF MATERIAL	CONSTITUENT (PPM) OF TOTAL PKG.
Active Device	Linear Technology	Silicon (Si)	7440-21-3	0.001077	1000000	29586
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.012129	975000	333196
		Iron (Fe)	7439-89-6	0.000299	24000	8214
		Phosphorus (P)	7723-14-0	0.000004	300	110
		Zinc (Zn)	7440-66-6	0.000009	700	247
		Nickel (Ni)	7440-02-0	0.000000	0	0
		Silicon (Si)	7440-21-3	0.000000	0	0
		Magnesium (Mg)	7439-95-4	0.000000	0	0
		Tin (Sn)	7440-31-5	0.000000	0	0
		Lead Frame Total:		0.012441	1000000	341767
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000092	150082	2527
		Exter. Plating Sn	7440-31-5	0.000521	849918	849918
		External Plating Total:		0.000613	1000000	16839
		Inter. Plating Ni	7440-02-0	0.000000	0	0
		Inter. Plating Ag	7440-22-4	0.000278	1000000	7637
		Internal Plating Total:		0.000278	1000000	7637
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000618	750000	16977
		Tin (Sn)	7440-31-5	0.000000	0	0
		Lead (Pb)	7439-92-1	0.000000	0	0
		Silica (SiO2)	60676-86-0	0.000000	0	0
		Indium (In)	7440-74-6	0.000000	0	0
		Metal Oxide		0.000000	0	0
		Antimony (Sb)	7440-36-0	0.000000	0	0
		Resin (EP)		0.000206	250000	5659
		Die Attach Total:		0.000824	1000000	22636
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002739	130000	75243
		Bromine (Br)	40039-93-8	0.000000	0	0
		Silica (SiO2)	60676-86-0	0.018120	860000	497775
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0
		Metal Hydroxide		0.000000	0	0
		Carbon Black (C)	1333-86-4	0.000211	10000	5796
		Encapsulation Total:		0.021070	1000000	578814
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000099	1000000	2720

TOTAL MASS (g): 0.036402