

LINEAR TECHNOLOGY MATERIALS DECLARATION

ltc3220ipf-1#trpbf

(Engineering Calculation)

UTQFN 4mm X 4mm Exposed Pad

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TOTAL MASS (g) : 0.02918

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	0.001794	1000000	61480.078125		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.009974	975000	341807.3125		
		Iron (Fe)	7439-89-6	0.000246	24000	8430.37988281		
		Phosphorus (P)	7723-14-0	0.000003	300	102.809501648		
		Zinc (Zn)	7440-66-6	0.000007	700	239.888824463		
		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:				0.010230	1000000	350580.40625		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000707	1000000	24235.1074219		
		External Plating Total:				0.000707	1000000	24235.1074219
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000362	1000000	12405.6787109		
Internal Plating Total:				0.000362	1000000	12405.6787109		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000861	750000	29506.3242188		
		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)		0.000287	250000	9835.44140625		
Die Attach Total:				0.001148	1000000	39341.765625		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001918	130000	65729.5390625		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.012685	860000	434712.8125		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000148	10000	5071.93505859		
		Encapsulation Total:				0.014751	1000000	505514.3125
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000188	1000000	6442.72851562		
					TOTAL MASS (g) :	0.02918		