

LINEAR TECHNOLOGY MATERIALS DECLARATION

LTC4231HUD-1#TRPBF

(Engineering Calculation)

QFN 3mm X 3mm Exp. Pad

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TOTAL MASS (g): 0.023567

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	0.001251	1000000	53083.2421875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.008752	975000	371370.5		
		Iron (Fe)	7439-89-6	0.000215	24000	9123.01855469		
		Phosphorus (P)	7723-14-0	0.000003	300	127.297943115		
		Zinc (Zn)	7440-66-6	0.000006	700	254.59588623		
		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:				0.008976	1000000	380875.4375		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000413	1000000	17514.5507812		
		External Plating Total:				0.000413	1000000	17514.5507812
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000203	1000000	8613.828125		
		Internal Plating Total:				0.000203	1000000	8613.828125
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000657	750000	27878.25		
		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)		0.000219	250000	9292.75		
Die Attach Total:				0.000876	1000000	37171		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001534	130000	65091.6835938		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010148	860000	430606.5		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		

		Carbon Black (C)	1333-86-4	0.000118	10000	5007.05224609
		Encapsulation Total:		0.011800	1000000	500705.25
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000048	1000000	2036.76708984
				TOTAL MASS (g):		0.023567