

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc2233iuk#pbf

(Engineering Calculation)

QFN 7mm X 7mm Exp. Pad

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**TOTAL MASS (g) : 0.129458**

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	0.003495	1000000	26997.1621094		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.057847	975000	446839.71875		
		Iron (Fe)	7439-89-6	0.001424	24000	10999.7021484		
		Phosphorus (P)	7723-14-0	0.000018	300	139.041183472		
		Zinc (Zn)	7440-66-6	0.000042	700	324.429382324		
		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		
<b>Lead Frame Total:</b>				<b>0.059331</b>	<b>1000000</b>	<b>458302.875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.002894	1000000	22355.2089844		
		<b>External Plating Total:</b>				<b>0.002894</b>	<b>1000000</b>	<b>22355.2089844</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.001274	1000000	9841.02539062		
<b>Internal Plating Total:</b>				<b>0.001274</b>	<b>1000000</b>	<b>9841.02539062</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001336	750000	10319.9453125		
		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)		0.000445	250000	3437.40673828		
<b>Die Attach Total:</b>				<b>0.001781</b>	<b>1000000</b>	<b>13757.3515625</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.007847	130000	60614.2265625		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.051910	860000	400979.3125		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000604	10000	4665.60400391		
		<b>Encapsulation Total:</b>				<b>0.060361</b>	<b>1000000</b>	<b>466259.15625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000322	1000000	2487.2923633		
					<b>TOTAL MASS (g) :</b>	<b>0.129458</b>		