

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc2238iuh#pbf

(Engineering Calculation)

QFN 5mm X 5mm Exp. Pad

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**TOTAL MASS (g) : 0.065175**

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	0.002502	1000000	38388.7929688		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.028382	975000	435471.90625		
		Iron (Fe)	7439-89-6	0.000699	24000	10724.9267578		
		Phosphorus (P)	7723-14-0	0.000009	300	138.089187622		
		Zinc (Zn)	7440-66-6	0.000020	700	306.864837646		
		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>0.029110</b>	<b>1000000</b>	<b>446641.78125</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.001398	1000000	21454.0839844		
		<b>External Plating Total:</b>				<b>0.001398</b>	<b>1000000</b>	<b>21454.0839844</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000635	1000000	9742.95898438		
<b>Internal Plating Total:</b>				<b>0.000635</b>	<b>1000000</b>	<b>9742.95898438</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001054	750000	16171.7773438		
		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)		0.000351	250000	5385.47802734		
<b>Die Attach Total:</b>				<b>0.001405</b>	<b>1000000</b>	<b>21557.2539062</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.003888	130000	59654.5273438		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.025723	860000	394674.21875		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000299	10000	4587.62939453		
		<b>Encapsulation Total:</b>				<b>0.029910</b>	<b>1000000</b>	<b>458916.375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000215	1000000	3298.796875		
					<b>TOTAL MASS (g) :</b>	<b>0.065175</b>		