

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc2657iufd-h12#trpbf

(Engineering Calculation)

QFN 4mm X 5mm Exp. Pad

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**TOTAL MASS (g) : 0.052793**

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	0.004208	1000000	79707.21875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.019997	975000	378779.8125		
		Iron (Fe)	7439-89-6	0.000492	24000	9319.38085938		
		Phosphorus (P)	7723-14-0	0.000006	300	113.650985718		
		Zinc (Zn)	7440-66-6	0.000014	700	265.185638428		
		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>0.020509</b>	<b>1000000</b>	<b>388478</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000227	1000000	4303.73535156		
		<b>External Plating Total:</b>				<b>0.000227</b>	<b>1000000</b>	<b>4303.73535156</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000498	1000000	9433.03222656		
<b>Internal Plating Total:</b>				<b>0.000498</b>	<b>1000000</b>	<b>9433.03222656</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001548	750000	29321.953125		
		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)		0.000516	250000	9773.98339844		
<b>Die Attach Total:</b>				<b>0.002064</b>	<b>1000000</b>	<b>39095.9335938</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.003244	130000	61447.296875		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.021457	860000	406434.84375		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000250	10000	4735.45751953		
		<b>Encapsulation Total:</b>				<b>0.024951</b>	<b>1000000</b>	<b>472617.59375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000336	1000000	6364.45507812		
					<b>TOTAL MASS (g) :</b>	<b>0.052793</b>		