

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

QFN 4mm X 4mm Exp. Pad

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**TOTAL MASS (g) : 0.04186**

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	0.002669	1000000	63760.90625		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.015961	975000	381299.28125		
		Iron (Fe)	7439-89-6	0.000393	24000	9388.54785156		
		Phosphorus (P)	7723-14-0	0.000005	300	119.447174072		
		Zinc (Zn)	7440-66-6	0.000011	700	262.783782959		
		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>0.016370</b>	<b>1000000</b>	<b>391070.0625</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000773	1000000	18454.7597656		
		<b>External Plating Total:</b>				<b>0.000773</b>	<b>1000000</b>	<b>18454.7597656</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000362	1000000	8647.97558594		
<b>Internal Plating Total:</b>				<b>0.000362</b>	<b>1000000</b>	<b>8647.97558594</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001103	750000	26350.046875		
		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)		0.000368	250000	8791.3125		
<b>Die Attach Total:</b>				<b>0.001471</b>	<b>1000000</b>	<b>35141.359375</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002616	130000	62494.7617188		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.017303	860000	413358.90625		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000201	10000	4801.77685547		
		<b>Encapsulation Total:</b>				<b>0.020120</b>	<b>1000000</b>	<b>480655.46875</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000095	1000000	2269.49633789		
					<b>TOTAL MASS (g) :</b>	<b>0.04186</b>		