

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

QFN 4mm X 5mm Exp. Pad

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**TOTAL MASS (g) : 0.053538**

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	0.004728	1000000	88310.7734375		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.019997	975000	373508.96875		
		Iron (Fe)	7439-89-6	0.000492	24000	9189.69921875		
		Phosphorus (P)	7723-14-0	0.000006	300	112.069503784		
		Zinc (Zn)	7440-66-6	0.000014	700	261.495513916		
		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>383072.21875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000227	1000000	4243.84765625		
		<b>External Plating Total:</b>				<b>0.000227</b>	<b>1000000</b>	<b>4243.84765625</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000429	1000000	8012.96923828		
<b>Internal Plating Total:</b>				<b>0.000429</b>	<b>1000000</b>	<b>8012.96923828</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001677	750000	31323.4257812		
		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)		0.000559	250000	10441.1425781		
<b>Die Attach Total:</b>				<b>0.002236</b>	<b>1000000</b>	<b>41764.5703125</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.003244	130000	60592.2421875		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.021457	860000	400779.1875		
		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	4669.5625		
		<b>Encapsulation Total:</b>				<b>0.024951</b>	<b>1000000</b>	<b>466041</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000458	1000000	8554.63867188		
					<b>TOTAL MASS (g) :</b>	<b>0.053538</b>		