

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

QFN 4mm X 4mm Exp. Pad

(printed on: 2020-07-11 19:21:36)

**TOTAL MASS (g) : 0.040772**

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	0.001838	1000000	45080.5		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.015961	975000	391474.40625		
		Iron (Fe)	7439-89-6	0.000393	24000	9639.08398438		
		Phosphorus (P)	7723-14-0	0.000005	300	122.634666443		
		Zinc (Zn)	7440-66-6	0.000011	700	269.796264648		
		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>401505.875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000773	1000000	18947.2304688		
		<b>External Plating Total:</b>				<b>0.000773</b>	<b>1000000</b>	<b>18947.2304688</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000362	1000000	8878.75		
<b>Internal Plating Total:</b>				<b>0.000362</b>	<b>1000000</b>	<b>8878.75</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000861	750000	21117.6894531		
		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)		0.000287	250000	7039.22998047		
<b>Die Attach Total:</b>				<b>0.001148</b>	<b>1000000</b>	<b>28156.9199219</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002616	130000	64162.4570312		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.017303	860000	424389.5		
		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	4929.91357422		
		<b>Encapsulation Total:</b>				<b>0.020120</b>	<b>1000000</b>	<b>493481.90625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000161	1000000	3948.83618164		
					<b>TOTAL MASS (g) :</b>	<b>0.040772</b>		