

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1t3513iuhf#pbf

(Engineering Calculation)

QFN 5mm X 7mm Exp. Pad

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**TOTAL MASS (g) : 0.089322**

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	0.002750	1000000	30787.5371094		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.037381	975000	418497.8125		
		Iron (Fe)	7439-89-6	0.000920	24000	10299.8310547		
		Phosphorus (P)	7723-14-0	0.000012	300	134.345626831		
		Zinc (Zn)	7440-66-6	0.000027	700	302.277618408		
		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>0.038340</b>	<b>1000000</b>	<b>429234.21875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.001850	1000000	20709.9550781		
		<b>External Plating Total:</b>				<b>0.001850</b>	<b>1000000</b>	<b>20709.9550781</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000831	1000000	9303.43359375		
<b>Internal Plating Total:</b>				<b>0.000831</b>	<b>1000000</b>	<b>9303.43359375</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001151	750000	12885.984375		
		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)		0.000384	250000	4299.06005859		
<b>Die Attach Total:</b>				<b>0.001535</b>	<b>1000000</b>	<b>17185.0429688</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.005689	130000	63691.0117188		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.037634	860000	421330.25		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000438	10000	4903.61474609		
		<b>Encapsulation Total:</b>				<b>0.043761</b>	<b>1000000</b>	<b>489924.875</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000255	1000000	2854.84399414		
					<b>TOTAL MASS (g) :</b>	<b>0.089322</b>		