

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc2963iudc-1#pbf

(Engineering Calculation)

QFN 3mm X 4mm Exp. Pad

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**TOTAL MASS (g) : 0.160603**

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	0.001540	1000000	9588.875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.013133	975000	81773.1796875		
		Iron (Fe)	7439-89-6	0.000323	24000	2011.17321777		
		Phosphorus (P)	7723-14-0	0.000004	300	24.906167984		
		Zinc (Zn)	7440-66-6	0.000009	700	56.0388832092		
		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>0.013469</b>	<b>1000000</b>	<b>83865.296875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000626	1000000	3896.37548828		
		<b>External Plating Total:</b>				<b>0.000626</b>	<b>1000000</b>	<b>3896.37548828</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000302	1000000	1880.41577148		
		<b>Internal Plating Total:</b>				<b>0.000302</b>	<b>1000000</b>	<b>1880.41577148</b>
Die Attach	ELECTRICALLY INSULATING ADHESIVE	Silver (Ag)	7440-22-4	0.000000	0	0		
		Tin (Sn)	7440-31-5	0.000000	0	0		
		Lead (Pb)	7439-92-1	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.000008	50000	49.812335968		
		Indium (In)	7440-74-6	0.000000	0	0		
		Metal Oxide		0.000050	300000	311.32711792		
		Antimony (Sb)	7440-36-0	0.000000	0	0		
		Resin (EP)		0.000109	650000	678.693115234		
<b>Die Attach Total:</b>				<b>0.000167</b>	<b>1000000</b>	<b>1039.8326416</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.018759	130000	116803.703125		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.124098	860000	772701.4375		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.001443	10000	8984.90136719		
		<b>Encapsulation Total:</b>				<b>0.144300</b>	<b>1000000</b>	<b>898490.0625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000199	1000000	1239.08190918		
					<b>TOTAL MASS (g) :</b>	<b>0.160603</b>		