

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc4227iufd-1#pbf

(Engineering Calculation)

QFN 4mm X 5mm Exp. Pad

(printed on: 2020-07-11 16:53:03)

**TOTAL MASS (g) : 0.051647**

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	0.003468	1000000	67147.875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.019997	975000	387184.53125		
		Iron (Fe)	7439-89-6	0.000492	24000	9526.16894531		
		Phosphorus (P)	7723-14-0	0.000006	300	116.172782898		
		Zinc (Zn)	7440-66-6	0.000014	700	271.069854736		
		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>397097.9375</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000227	1000000	4399.23046875		
		<b>External Plating Total:</b>				<b>0.000227</b>	<b>1000000</b>	<b>4399.23046875</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000498	1000000	9642.34082031		
<b>Internal Plating Total:</b>				<b>0.000498</b>	<b>1000000</b>	<b>9642.34082031</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001346	750000	26061.4277344		
		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)		0.000449	250000	8693.59765625		
<b>Die Attach Total:</b>				<b>0.001795</b>	<b>1000000</b>	<b>34755.0234375</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.003244	130000	62810.75		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.021457	860000	415453.21875		
		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	4840.53271484		
		<b>Encapsulation Total:</b>				<b>0.024951</b>	<b>1000000</b>	<b>483104.53125</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000199	1000000	3853.06396484		
					<b>TOTAL MASS (g) :</b>	<b>0.051647</b>		