

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc3219eud#pbf

(Engineering Calculation)

QFN 3mm X 3mm Exp. Pad

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**TOTAL MASS (g) : 0.023509**

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	0.001152	1000000	49003.0117188		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.008752	975000	372286.75		
		Iron (Fe)	7439-89-6	0.000215	24000	9145.52734375		
		Phosphorus (P)	7723-14-0	0.000003	300	127.612014771		
		Zinc (Zn)	7440-66-6	0.000006	700	255.224029541		
		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>0.008976</b>	<b>1000000</b>	<b>381815.125</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000413	1000000	17557.7617188		
		<b>External Plating Total:</b>				<b>0.000413</b>	<b>1000000</b>	<b>17557.7617188</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000203	1000000	8635.07910156		
<b>Internal Plating Total:</b>				<b>0.000203</b>	<b>1000000</b>	<b>8635.07910156</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000623	750000	26500.7617188		
		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)		0.000208	250000	8847.765625		
<b>Die Attach Total:</b>				<b>0.000831</b>	<b>1000000</b>	<b>35348.5273438</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001534	130000	65252.2734375		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010148	860000	431668.875		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000118	10000	5019.40576172		
		<b>Encapsulation Total:</b>				<b>0.011800</b>	<b>1000000</b>	<b>501940.59375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000134	1000000	5700.00341797		
					<b>TOTAL MASS (g) :</b>	<b>0.023509</b>		