

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc311limse#trpbf

(Engineering Calculation)

MSOP-Exposed

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**TOTAL MASS (g) : 0.038822**

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	0.003418	1000000	88042.8046875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.013845	975000	356627.46875		
		Iron (Fe)	7439-89-6	0.000341	24000	8783.67382812		
		Phosphorus (P)	7723-14-0	0.000004	300	103.034294128		
		Zinc (Zn)	7440-66-6	0.000010	700	257.585723877		
		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>0.014200</b>	<b>1000000</b>	<b>365771.75</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	18289.2304688		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>18289.2304688</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	2215.23730469		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>2215.23730469</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.001009	750000	25990.4003906		
		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)		0.000336	250000	8654.87988281		
<b>Die Attach Total:</b>				<b>0.001345</b>	<b>1000000</b>	<b>34645.28125</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002439	130000	62825.1601562		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.015571	830000	401086.75		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000657	35000	16923.3828125		
		Carbon Black (C)	1333-86-4	0.000094	5000	2421.3059082		
		<b>Encapsulation Total:</b>				<b>0.018761</b>	<b>1000000</b>	<b>483256.59375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000302	1000000	7779.08935547		
					<b>TOTAL MASS (g) :</b>	<b>0.038822</b>		