

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc221cs#trpbf

(Engineering Calculation)

SOIC

(printed on: 2020-07-11 16:26:10)

**TOTAL MASS (g) : 0.155503**

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	0.002994	1000000	19253.6835938		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.051070	975000	328418.71875		
		Iron (Fe)	7439-89-6	0.001257	24000	8083.4609375		
		Phosphorus (P)	7723-14-0	0.000016	300	102.892097473		
		Zinc (Zn)	7440-66-6	0.000037	700	237.937988281		
		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>0.052380</b>	<b>1000000</b>	<b>336843</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.002954	1000000	18994.5507812		
		<b>External Plating Total:</b>				<b>0.002954</b>	<b>1000000</b>	<b>18994.5507812</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000419	1000000	2694.48681641		
<b>Internal Plating Total:</b>				<b>0.000419</b>	<b>1000000</b>	<b>2694.48681641</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000912	750000	5864.84960938		
		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)		0.000304	250000	1954.94970703		
<b>Die Attach Total:</b>				<b>0.001216</b>	<b>1000000</b>	<b>7819.79882812</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.012389	130000	79670.640625		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.079099	830000	508666.40625		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.003336	35000	21453.0019531		
		Carbon Black (C)	1333-86-4	0.000477	5000	3067.47070312		
		<b>Encapsulation Total:</b>				<b>0.095301</b>	<b>1000000</b>	<b>612857.5</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000239	1000000	1536.95068359		
					<b>TOTAL MASS (g) :</b>	<b>0.155503</b>		