

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc1697ems#pbf

(Engineering Calculation)

MSOP

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**TOTAL MASS (g) : 0.02772**

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	0.002273	1000000	81998.484375		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.010433	975000	376370.46875		
		Iron (Fe)	7439-89-6	0.000257	24000	9271.27539062		
		Phosphorus (P)	7723-14-0	0.000003	300	108.225006104		
		Zinc (Zn)	7440-66-6	0.000007	700	252.525009155		
		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>0.010700</b>	<b>1000000</b>	<b>386002.53125</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	25614.1523438		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>25614.1523438</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	3102.45019531		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>3102.45019531</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000751	750000	27092.3261719		
		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)		0.000250	250000	9018.75097656		
<b>Die Attach Total:</b>				<b>0.001001</b>	<b>1000000</b>	<b>36111.078125</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001659	130000	59848.4257812		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010591	830000	382070.375		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000447	35000	16125.5263672		
		Carbon Black (C)	1333-86-4	0.000064	5000	2308.80004883		
		<b>Encapsulation Total:</b>				<b>0.012761</b>	<b>1000000</b>	<b>460353.0625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000189	1000000	6818.17529297		
					<b>TOTAL MASS (g) :</b>	<b>0.02772</b>		