

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc1699ems8-81#trpbf

(Engineering Calculation)

MSOP

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**TOTAL MASS (g) : 0.026754**

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	0.001613	1000000	60289.9882812		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.010433	975000	389960		
		Iron (Fe)	7439-89-6	0.000257	24000	9606.03125		
		Phosphorus (P)	7723-14-0	0.000003	300	112.132667542		
		Zinc (Zn)	7440-66-6	0.000007	700	261.642883301		
		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>399939.84375</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	26538.9960938		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>26538.9960938</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	3214.46972656		
		<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>3214.46972656</b>
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000596	750000	22277.0214844		
		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)		0.000199	250000	7438.1328125		
<b>Die Attach Total:</b>				<b>0.000795</b>	<b>1000000</b>	<b>29715.1542969</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001659	130000	62009.3554688		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010591	830000	395865.6875		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000447	35000	16707.7675781		
		Carbon Black (C)	1333-86-4	0.000064	5000	2392.16333008		
		<b>Encapsulation Total:</b>				<b>0.012761</b>	<b>1000000</b>	<b>476974.9375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000089	1000000	3326.60229492		
					<b>TOTAL MASS (g) :</b>	<b>0.026754</b>		