

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

MSOP-Exposed

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**TOTAL MASS (g) : 0.027316**

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	0.002020	1000000	73949.265625		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.010433	975000	381936.9375		
		Iron (Fe)	7439-89-6	0.000257	24000	9408.39648438		
		Phosphorus (P)	7723-14-0	0.000003	300	109.825637817		
		Zinc (Zn)	7440-66-6	0.000007	700	256.259796143		
		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>391711.4375</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	25992.9824219		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>25992.9824219</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	3148.33496094		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>3148.33496094</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000695	750000	25442.9394531		
		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)		0.000232	250000	8493.18359375		
<b>Die Attach Total:</b>				<b>0.000927</b>	<b>1000000</b>	<b>33936.1210938</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001659	130000	60733.5742188		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010591	830000	387721.125		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000447	35000	16364.0195312		
		Carbon Black (C)	1333-86-4	0.000064	5000	2342.94677734		
		<b>Encapsulation Total:</b>				<b>0.012761</b>	<b>1000000</b>	<b>467161.625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000112	1000000	4100.15673828		
					<b>TOTAL MASS (g) :</b>	<b>0.027316</b>		