

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

MSOP Exposed Pad

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**TOTAL MASS (g) : 0.036837**

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	0.001989	1000000	53994.59375		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.013845	975000	375844.71875		
		Iron (Fe)	7439-89-6	0.000341	24000	9256.99121094		
		Phosphorus (P)	7723-14-0	0.000004	300	108.586402893		
		Zinc (Zn)	7440-66-6	0.000010	700	271.466003418		
		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>385481.75</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	19274.765625		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>19274.765625</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	2334.60766602		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>2334.60766602</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000684	750000	18568.2773438		
		Tin (Sn)	7440-31-5	0.000000	0	0		
		Lead (Pb)	7439-92-1	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.000023	25000	624.371887207		
		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)		0.000205	225000	5565.05322266		
<b>Die Attach Total:</b>				<b>0.000912</b>	<b>1000000</b>	<b>24757.7011719</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002533	135000	68762.3359375		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.016134	860000	437983.28125		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000000	0	0		
		Carbon Black (C)	1333-86-4	0.000094	5000	2551.78076172		
		<b>Encapsulation Total:</b>				<b>0.018761</b>	<b>1000000</b>	<b>509297.375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000179	1000000	4859.24169922		
					<b>TOTAL MASS (g) :</b>	<b>0.036837</b>		