

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc1663ims8#pbf

(Engineering Calculation)

MSOP

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**TOTAL MASS (g) : 0.026024**

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	0.001063	1000000	40846.8710938		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.010433	975000	400898.78125		
		Iron (Fe)	7439-89-6	0.000257	24000	9875.49023438		
		Phosphorus (P)	7723-14-0	0.000003	300	115.27809906		
		Zinc (Zn)	7440-66-6	0.000007	700	268.98223877		
		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>411158.5625</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	27283.4414062		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>27283.4414062</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	3304.63867188		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>3304.63867188</b>		
Die Attach	ELECTRICALLY CONDUCTIVE ADHESIVE	Silver (Ag)	7440-22-4	0.000461	750000	17714.4003906		
		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)		0.000154	250000	5917.60888672		
<b>Die Attach Total:</b>				<b>0.000615</b>	<b>1000000</b>	<b>23632.0097656</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.001659	130000	63748.7851562		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.010591	830000	406970.125		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000447	35000	17176.4355469		
		Carbon Black (C)	1333-86-4	0.000064	5000	2459.26586914		
		<b>Encapsulation Total:</b>				<b>0.012761</b>	<b>1000000</b>	<b>490354.5625</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000089	1000000	3419.91674805		
					<b>TOTAL MASS (g) :</b>	<b>0.026024</b>		