

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1tc4420cmse#trpbf

(Engineering Calculation)

MSOP-Exposed

(printed on: 2020-07-11 16:20:07)

**TOTAL MASS (g) : 0.037291**

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	0.003189	1000000	85516.5546875		
Die Coat	Dow Corning	Silicone	69430-27-9	0.000000	0	0		
Lead Frame	Cu	Copper (Cu)	7440-50-8	0.013845	975000	371269		
		Iron (Fe)	7439-89-6	0.000341	24000	9144.29199219		
		Phosphorus (P)	7723-14-0	0.000004	300	107.264411926		
		Zinc (Zn)	7440-66-6	0.000010	700	268.16104126		
		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>380788.6875</b>		
Plating	PMI	Exter. Plating Pb	7439-92-1	0.000000	0	0		
		Exter. Plating Sn	7440-31-5	0.000710	1000000	19040.1035156		
		<b>External Plating Total:</b>				<b>0.000710</b>	<b>1000000</b>	<b>19040.1035156</b>
		Inter. Plating Ni	7440-02-0	0.000000	0	0		
		Inter. Plating Ag	7440-22-4	0.000086	1000000	2306.18505859		
<b>Internal Plating Total:</b>				<b>0.000086</b>	<b>1000000</b>	<b>2306.18505859</b>		
Die Attach	ELECTRICALLY INSULATING ADHESIVE	Silver (Ag)	7440-22-4	0.000000	0	0		
		Tin (Sn)	7440-31-5	0.000000	0	0		
		Lead (Pb)	7439-92-1	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.000011	50000	294.977172852		
		Indium (In)	7440-74-6	0.000000	0	0		
		Metal Oxide		0.000063	300000	1689.41455078		
		Antimony (Sb)	7440-36-0	0.000000	0	0		
		Resin (EP)		0.000137	650000	3673.80639648		
<b>Die Attach Total:</b>				<b>0.000211</b>	<b>1000000</b>	<b>5658.19824219</b>		
Encapsulation	MULTI-AROMATIC RESIN Br/Sb FREE	Resin (EP)		0.002439	130000	65404.4765625		
		Bromine (Br)	40039-93-8	0.000000	0	0		
		Silica (SiO2)	60676-86-0	0.015571	830000	417553.5625		
		Antimony Trioxide (Sb2O3)	1309-64-4	0.000000	0	0		
		Metal Hydroxide		0.000657	35000	17618.1816406		
		Carbon Black (C)	1333-86-4	0.000094	5000	2520.71386719		
		<b>Encapsulation Total:</b>				<b>0.018761</b>	<b>1000000</b>	<b>503096.9375</b>
Bond Wire Estimated	AFW/TANAKA/ Kn	Gold (Au)	7440-57-5	0.000134	1000000	3593.35791016		
					<b>TOTAL MASS (g) :</b>	<b>0.037291</b>		