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Wire vol = 1.84078E-07

Material	Mat'l Density (Kg/cubic inches)
Ceramic	0.05902
Glass (LS-0113)	0.112251388
Leadframe (Alloy 42)	0.13166
Aluminum Wire	0.04424
Silicon	0.03814
Die Attach (Ag glass)	0.131
Tin Lead Solder (63/37)	0.137815

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
JG	8	Ceramic(Base)	0.0071356	0.000421143		
		Glass (Base)	0.00085184	9.56202E-05		
		Ceramic (Cap)	0.00420489	0.000248173		
		Glass (Cap)	0.00087815	9.85736E-05		
		L/F	0.0013872	0.000182639		
		Wire	1.47262E-06	6.51488E-08		
		Silicon	0.00003705	1.41309E-06		
		Die Attach	0.000036	0.000004716		
		Solder	0.00002912	4.01317E-06		
		Total Weight (Kg)=		0.001056356	0.001	5.636%
JG	8	Ceramic(Base)	0.0070516	0.000416185		
		Glass (Base)	0.00075944	8.52482E-05		
		Ceramic (Cap)	0.00393642	0.000232328		
		Glass (Cap)	0.00069446	7.79541E-05		
		L/F	0.0013872	0.000182639		
		Wire	1.47262E-06	6.51488E-08		
		Silicon	0.00003705	1.41309E-06		
		Die Attach	0.000036	0.000004716		
		Solder	0.00002912	4.01317E-06		
		Total Weight (Kg)=		0.001004561	0.001	0.456%
U	10	Ceramic(Base)	0.001108782	6.54403E-05		
		Glass (Base)	0.000329448	3.6981E-05		
		Ceramic (Cap)	0.001192487	7.03806E-05		
		Glass (Cap)	0.000233448	2.62049E-05		
		L/F	0.00034	4.47644E-05		
		Wire	1.84078E-06	8.1436E-08		
		Silicon	0.0000832	3.17325E-06		
		Die Attach	0.0000288	3.7728E-06		
		Solder	0.000066	9.09579E-06		
		Total Weight (Kg) =		0.000259894	0.0002	29.947%
W	14	Base	0.0020382	0.000120295		
		Glass (Base)	0.00043152	4.84387E-05		
		Cap	0.00180438	0.000106495		
		Glass (Cap)	0.00032912	3.69442E-05		
		L/F	0.000476	6.26702E-05		
		Wire	2.57709E-06	1.1401E-07		
		Silicon	0.0000832	3.17325E-06		
		Die Attach	0.0000288	3.7728E-06		
		Solder	0.0000924	1.27341E-05		
		Total Weight (Kg) =		0.000394636	0.0004	1.341%

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
W	16	Base	0.00261428	0.000154295		
		Glass (Base)	0.000532553	5.97798E-05		
		Cap	0.00270768	0.000159807		
		Glass (Cap)	0.00056646	6.35859E-05		
		L/F	0.000544	7.1623E-05		
		Wire	2.94524E-06	1.30298E-07		
		Silicon	0.0000832	3.17325E-06		
		Die Attach	0.0000288	3.7728E-06		
		Solder	0.0001056	1.45533E-05		
				Total Weight (Kg) =	0.00053072	0.0005
W	20	Base	0.003216948	0.000189864		
		Glass (Base)	0.000830232	9.31947E-05		
		Cap	0.0038309	0.0002261		
		Glass (Cap)	0.0008014	8.99583E-05		
		L/F	0.00068	8.95288E-05		
		Wire	3.68155E-06	1.62872E-07		
		Silicon	0.0001755	6.69357E-06		
		Die Attach	0.0000408	5.3448E-06		
		Solder	0.000099	1.36437E-05		
				Total Weight (Kg) =	0.000714491	0.0006
WD	48	Base	0.0072618	0.000428591		
		Glass (Base)	0.001843	0.000206879		
		Cap	0.0074121	0.000437462		
		Glass (Cap)	0.001643	0.000184429		
		L/F	0.001596	0.000210129		
		Wire	8.83573E-06	3.90893E-07		
		Silicon	0.0002717	1.03626E-05		
		Die Attach	0.000069	0.000009039		
		Solder	0.000216	2.9768E-05		
				Total Weight (Kg) =	0.001517052	0.0014
WD	56	Base	0.0083328	0.000491802		
		Glass (Base)	0.00204	0.000228993		
		Cap	0.0084636	0.000499522		
		Glass (Cap)	0.001812	0.0002034		
		L/F	0.001862	0.000245151		
		Wire	1.03084E-05	4.56041E-07		
		Silicon	0.0002717	1.03626E-05		
		Die Attach	0.000069	0.000009039		
		Solder	0.000252	3.47294E-05		
				Total Weight (Kg) =	0.001723454	0.0015
J Small Cavity	14	Base	0.0139006	0.000820413		
		Glass (Base)	0.002348293	0.000263599		
		Cap	0.00864842	0.00051043		
		Glass (Cap)	0.002762563	0.000310102		
		L/F	0.0018578	0.000244598		
		Wire	2.57709E-06	1.1401E-07		
		Silicon	0.0000832	3.17325E-06		
		Die Attach	0.0000288	3.7728E-06		
		Solder	0.00013426	1.8503E-05		
				Total Weight (Kg) =	0.002174705	0.0021

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
J Large Cavity	14	Base	0.016016	0.000945264		
		Glass (Base)	0.002346708	0.000263421		
		Cap	0.00882274	0.000520718		
		Glass (Cap)	0.001742633	0.000195613		
		L/F	0.00180054	0.000237059		
		Wire	2.57709E-06	1.1401E-07		
		Silicon	0.00013	4.9582E-06		
		Die Attach	0.0000392	5.1352E-06		
		Solder	0.0001295	1.7847E-05		
		Total Weight (Kg) =			0.00219013	0.0021
WA	14	Base	0.000942153	5.56059E-05		
		Glass (Base)	0.000274554	3.08191E-05		
		Cap	0.000935268	5.51995E-05		
		Glass (Cap)	0.000249308	2.79852E-05		
		L/F	0.000476	6.26702E-05		
		Wire	2.57709E-06	1.1401E-07		
		Silicon	0.0000325	1.23955E-06		
		Die Attach	0.0000162	2.1222E-06		
		Solder	0.0000924	1.27341E-05		
		Total Weight (Kg) =			0.00024849	0.0002
J Small Cavity	16	Base	0.0139006	0.000820413		
		Glass (Base)	0.002348293	0.000263599		
		Cap	0.00864842	0.00051043		
		Glass (Cap)	0.002927413	0.000328606		
		L/F	0.00209088	0.000275285		
		Wire	2.94524E-06	1.30298E-07		
		Silicon	0.0000832	3.17325E-06		
		Die Attach	0.0000288	3.7728E-06		
		Solder	0.00015904	2.19181E-05		
		Total Weight (Kg) =			0.002227328	0.0022
J Large Cavity	16	Base	0.016016	0.000945264		
		Glass (Base)	0.002346708	0.000263421		
		Cap	0.00882274	0.000520718		
		Glass (Cap)	0.001742633	0.000195613		
		L/F	0.00221696	0.000291885		
		Wire	2.94524E-06	1.30298E-07		
		Silicon	0.00013	4.9582E-06		
		Die Attach	0.0000392	5.1352E-06		
		Solder	0.000154336	2.12698E-05		
		Total Weight (Kg) =			0.002248395	0.0022
J	20	Base	0.02012	0.001187482		
		Glass (Base)	0.00217792	0.000244475		
		Cap	0.0144495	0.000852809		
		Glass (Cap)	0.003931375	0.000441302		
		L/F	0.0026448	0.000348214		
		Wire	3.68155E-06	1.62872E-07		
		Silicon	0.00013	4.9582E-06		
		Die Attach	0.0000392	5.1352E-06		
		Solder	0.0002198	3.02917E-05		
		Total Weight (Kg) =			0.003114831	0.0031

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
J	24	Base	0.048125	0.002840338		
		Glass (Base)	0.007713639	0.000865867		
		Cap	0.03012697	0.001778094		
		Glass (Cap)	0.007772475	0.000872471		
		L/F	0.00474696	0.000624985		
		Wire	4.41786E-06	1.95446E-07		
		Silicon	0.0002925	1.1156E-05		
		Die Attach	0.0000722	9.4582E-06		
		Solder	0.00039156	5.39628E-05		
				Total Weight (Kg) =	0.007056526	0.0066
JT	24	Base	0.0263625	0.001555915		
		Glass (Base)	0.0046554	0.000522575		
		Cap	0.0167365	0.000987788		
		Glass (Cap)	0.0044025	0.000494187		
		L/F	0.00352944	0.000464686		
		Wire	4.41786E-06	1.95446E-07		
		Silicon	0.00013	4.9582E-06		
		Die Attach	0.0000392	5.1352E-06		
		Solder	0.00024576	3.38694E-05		
				Total Weight (Kg) =	0.004069309	0.004
W	24	Base	0.00540015	0.000318717		
		Glass (Base)	0.0009751	0.000109456		
		Cap	0.0055125	0.000325348		
		Glass (Cap)	0.0011025	0.000123757		
		L/F	0.000816	0.000107435		
		Wire	4.41786E-06	1.95446E-07		
		Silicon	0.00013	4.9582E-06		
		Die Attach	0.0000392	5.1352E-06		
		Solder	0.0001188	1.63724E-05		
				Total Weight (Kg) =	0.001011374	0.0011
J	28	Base	0.06061725	0.00357763		
		Glass (Base)	0.009894	0.001110615		
		Cap	0.0380021	0.002242884		
		Glass (Cap)	0.0051395	0.000576916		
		L/F	0.00577416	0.000760226		
		Wire	5.15418E-06	2.28021E-07		
		Silicon	0.0008788	3.35174E-05		
		Die Attach	0.00027	0.00003537		
		Solder	0.000293888	4.05022E-05		
				Total Weight (Kg) =	0.008377889	0.0079
JT	28	Base	0.0312372	0.00184362		
		Glass (Base)	0.0046332	0.000520083		
		Cap	0.0194436	0.001147561		
		Glass (Cap)	0.006098616	0.000684578		
		L/F	0.00426216	0.000561156		
		Wire	5.15418E-06	2.28021E-07		
		Silicon	0.0002912	1.11064E-05		
		Die Attach	0.000068	0.000008908		
		Solder	0.00028672	3.95143E-05		
				Total Weight (Kg) =	0.004816755	0.0047

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
HV	68	Base	0.013658	0.000806095		
		Glass (Base)	0.001204	0.000135151		
		Cap	0.01215	0.000717093		
		Glass (Cap)	0.0009	0.000101026		
		L/F	0.002992	0.000393927		
		Wire	1.25173E-05	5.53765E-07		
		Silicon	0.00052	1.98328E-05		
		Die Attach	0.0001728	2.26368E-05		
		Solder	0.0004624	6.37257E-05		
		Total Weight (Kg) =	0.002260041	0.002	13.002%	
HFP	132	Base	0.042725	0.00252163		
		Glass (Base)	0.0111375	0.0012502		
		Cap	0.0406375	0.002398425		
		Glass (Cap)	0.00434	0.000487171		
		L/F	0.004356	0.000573511		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.0013312	5.0772E-05		
		Die Attach	0.0005184	6.79104E-05		
		Solder	0.0008976	0.000123703		
		Total Weight (Kg) =	0.007474397	0.0085	12.066%	
<u>Multilayered</u>						
HFG	132	Header	0.06190325	0.00365353		
		Lid	0.0075615	0.000995547		
		L/F	0.00776478	0.001022311		
		Tie Bars	0.03388	0.001999598		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.0010192	3.88723E-05		
		Die Attach	0.0004096	5.36576E-05		
		Solder	0.00121176	0.000166999		
				Total Weight (Kg) =	0.007931589	0.0087
Small Cavity	132	Header	0.06190325	0.00365353		
		Lid	0.0075615	0.000995547		
		L/F	0.00776478	0.001022311		
		Tie Bars	0.03388	0.001999598		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.0010192	3.88723E-05		
		Die Attach	0.0004096	5.36576E-05		
		Solder	0.00121176	0.000166999		
				Total Weight (Kg) =	0.007931589	0.0087
HFH	352	Header	0.3459154	0.020415927		
		Lid	0.013824	0.001820068		
		L/F	0.012309504	0.001620669		
		Tie Bars	0.06114486	0.00360877		
		Wire	6.47953E-05	2.86655E-06		
		Silicon	0.0029952	0.000114237		
		Die Attach	0.0010816	0.00014169		
		Solder	0.002455024	0.000338339		
				Total Weight (Kg) =	0.028062566	0.0299
HFG	132	Header	0.06239	0.003682258		
		Lid	0.0075615	0.000995547		
		L/F	0.0063867	0.000840873		
		Tie Bars	0.03388	0.001999598		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.0017797	6.78778E-05		
		Die Attach	0.0006724	8.80844E-05		
		Solder	0.0009702	0.000133708		
				Total Weight (Kg) =	0.007809021	0.0087
Large Cavity	132	Header	0.06239	0.003682258		
		Lid	0.0075615	0.000995547		
		L/F	0.0063867	0.000840873		
		Tie Bars	0.03388	0.001999598		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.0017797	6.78778E-05		
		Die Attach	0.0006724	8.80844E-05		
		Solder	0.0009702	0.000133708		
				Total Weight (Kg) =	0.007809021	0.0087

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
HFH	320	Header	0.247198816	0.014589674		
		Lid	0.01215	0.001599669		
		Heat Sink	0.01805	0.004821155		
		L/F	0.012703692	0.001672568		
		Tie Bars	0.06114486	0.00360877		
		Wire	5.89049E-05	2.60595E-06		
		Silicon	0.0039208	0.000149539		
		Die Attach	0.0013888	0.000181933		
		Solder	0.0027552	0.00012189		
		Total Weight (Kg) =	0.026747804	0.0321	16.674%	
HFG	196	Header	0.1593964	0.009407576		
		Lid	0.0113535	0.001494802		
		L/F	0.00913368	0.00120254		
		Tie Bars	0.0476	0.002809352		
		Wire	3.60792E-05	1.59615E-06		
		Silicon	0.001365	5.20611E-05		
		Die Attach	0.0005304	6.94824E-05		
		Solder	0.00160524	0.000221226		
				Total Weight (Kg) =	0.015258635	0.0167
HFG	164	Header	0.101671	0.006000622		
		Lid	0.008664	0.001140702		
		L/F	0.0109654	0.001443705		
		Tie Bars	0.063	0.00371826		
		Wire	3.01887E-05	1.33555E-06		
		Silicon	0.00117	4.46238E-05		
		Die Attach	0.0004624	6.05744E-05		
		Solder	0.00190978	0.000263196		
				Total Weight (Kg) =	0.012673019	
HFG	84	Header	0.0198445	0.001171222		
		Lid	0.002601	0.000342448		
		L/F	0.00396075	0.000521472		
		Tie Bars	0.0182875	0.001079328		
		Wire	1.54625E-05	6.84062E-07		
		Silicon	0.0010192	3.88723E-05		
		Die Attach	0.0004096	5.36576E-05		
		Solder	0.00062055	8.55211E-05		
				Total Weight (Kg) =	0.003293206	0.0035
FJ Large Cavity	44	Header	0.0221085	0.001304844		
		Lid	0.00225625	0.000297058		
		L/F	0.001862076	0.000245161		
		Wire	8.09942E-06	3.58318E-07		
		Silicon	0.00052	1.98328E-05		
		Die Attach	0.0002304	3.01824E-05		
		Solder	0.000107819	1.48591E-05		
				Total Weight (Kg) =	0.001912295	0.0027
FJ Small Cavity	44	Header	0.0231705	0.001367523		
		Lid	0.008	0.00047216		
		Seal Glass	0.00057	6.39833E-05		
		L/F	0.001862076	0.000245161		
		Wire	8.09942E-06	3.58318E-07		
		Silicon	0.00052	1.98328E-05		
		Die Attach	0.0002304	3.01824E-05		
		Solder	0.000107819	1.48591E-05		
		Total Weight (Kg) =	0.00221406	0.0027	17.998%	

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error	
FJ	68	Header	0.064198	0.003788966			
		Lid	0.010907213	0.000643744			
		Lid Lens	0.00453646	0.000509224			
		Seal Glass	0.0016506	0.000185282			
		L/F	0.002364474	0.000311307			
		Wire	1.25173E-05	5.53765E-07			
		Silicon	0.0010192	3.88723E-05			
		Die Attach	0.0004096	5.36576E-05			
		Solder	0.00016663	2.29641E-05			
				Total Weight (Kg) =	0.00555457	0.0066	15.840%
FJ	68	Header	0.064198	0.003788966			
		Lid	0.00366025	0.000481909			
		L/F	0.002660034	0.00035022			
		Wire	1.25173E-05	5.53765E-07			
		Silicon	0.0010192	3.88723E-05			
		Die Attach	0.0004096	5.36576E-05			
		Solder	0.000173039	2.38474E-05			
				Total Weight (Kg) =	0.004738026	0.0066	28.212%
JD Small Cavity	40	Header	0.0980975	0.005789714			
		Lid	0.00255025	0.000335766			
		L/F	0.00276	0.000363382			
		Wire	7.36311E-06	3.25744E-07			
		Silicon	0.0006877	2.62289E-05			
		Die Attach	0.0002916	3.81996E-05			
		Solder	0.000196	2.70117E-05			
				Total Weight (Kg) =	0.006580628	0.0078	15.633%
JD Large Cavity	40	Header	0.097448	0.005751381			
		Lid	0.00265225	0.000349195			
		L/F	0.00276	0.000363382			
		Wire	7.36311E-06	3.25744E-07			
		Silicon	0.0006877	2.62289E-05			
		Die Attach	0.0002916	3.81996E-05			
		Solder	0.000196	2.70117E-05			
				Total Weight (Kg) =	0.006555724	0.0078	15.952%
GB	68	Header	0.0983975	0.00580742			
		Lid	0.00366025	0.000481909			
		Pins	0.005825644	0.000767004			
		Wire	1.25173E-05	5.53765E-07			
		Silicon	0.0010192	3.88723E-05			
		Die Attach	0.0004096	5.36576E-05			
		Solder	0.000365304	5.03444E-05			
				Total Weight (Kg) =	0.007199761	0.0073	1.373%
GFA Small Cavity	141	Header	0.1004555	0.005928884			
		Lid	0.0075615	0.000995547			
		Pins	0.010445104	0.001375202			
		Wire	2.5955E-05	1.14825E-06			
		Silicon	0.00208	7.93312E-05			
		Die Attach	0.0007744	0.000101446			
		Solder	0.000717603	9.88964E-05			
				Total Weight (Kg) =	0.008580455	0.0088	2.495%

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
GFA	141	Header	0.10016	0.005911443		
		Lid	0.0075615	0.000995547		
		Pins	0.010445104	0.001375202		
		Wire	2.5955E-05	1.14825E-06		
		Silicon	0.00208	7.93312E-05		
		Die Attach	0.0007744	0.000101446		
		Solder	0.000717603	9.88964E-05		
		Total Weight (Kg) =	0.008563015	0.0088	2.693%	
GF	305	Header	0.342401656	0.020208546		
		Lid	0.01215	0.001599669		
		Heat Sink	0.0484	0.01292764		
		Pins	0.01828458	0.002407348		
		Wire	5.61437E-05	2.4838E-06		
		Silicon	0.0039325	0.000149986		
		Die Attach	0.0013924	0.000182404		
		Solder	0.001379787	0.000190155		
Total Weight (Kg) =	0.037668232					
GB	68	Header	0.0886	0.005229172		
		Lid	0.010907213	0.000643744		
		Lid Lens	0.00453646	0.000509224		
		Seal Glass	0.0016506	0.000185282		
		Pins	0.00537115	0.000707166		
		Wire	1.25173E-05	5.53765E-07		
		Silicon	0.00117	4.46238E-05		
		Die Attach	0.0004624	6.05744E-05		
Solder	0.000346078	4.76947E-05				
Total Weight (Kg) =	0.007428034	0.0073	1.754%			
GB	181	Header	0.2313915	0.013656726		
		Lid	0.0319225	0.001884066		
		Pins	0.014296736	0.001882308		
		Wire	3.33181E-05	1.47399E-06		
		Silicon	0.00117	4.46238E-05		
		Die Attach	0.0004624	6.05744E-05		
		Solder	0.000921178	0.000126952		
		Total Weight (Kg) =	0.017656725	0.0165	7.010%	
GB	132	Header	0.1674	0.009879948		
		Lid	0.003481	0.000458308		
		Pins	0.011126139	0.001464867		
		Wire	2.42983E-05	1.07495E-06		
		Silicon	0.00117	4.46238E-05		
		Die Attach	0.0004624	6.05744E-05		
		Solder	0.000671798	9.25839E-05		
		Total Weight (Kg) =	0.012001981	0.0135	11.096%	
GB	145	Header	0.18145	0.010709179		
		Lid	0.0093615	0.001232535		
		Pins	0.012221895	0.001609135		
		Wire	2.66913E-05	1.18082E-06		
		Silicon	0.0026325	0.000100404		
		Die Attach	0.0009604	0.000125812		
		Solder	0.00073796	0.000101702		
		Total Weight (Kg) =	0.013879948	0.0147	5.579%	

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
GLP	429	Header	0.049379645	0.002914387		
		Lid	0.008922738	0.001174768		
		Balls	0.003768563	0.000519365		
		Silicon	0.002620813	9.99578E-05		
		Total Weight (Kg) =	0.004708477	0.0062	24.057%	
FD Large Cavity	68	Header	0.064	0.00377728		
		Lid	0.00366025	0.000481909		
		Wire	1.25173E-05	5.53765E-07		
		Silicon	0.0008125	3.09888E-05		
		Die Attach	0.0003364	4.40684E-05		
		Solder	0.000410166	5.65271E-05		
		Total Weight (Kg) =	0.004391327	0.0046	4.536%	
FD Small Cavity	68	Header	0.0672	0.003966144		
		Lid	0.00366025	0.000481909		
		Wire	1.25173E-05	5.53765E-07		
		Silicon	0.0008125	3.09888E-05		
		Die Attach	0.0003364	4.40684E-05		
		Solder	0.000410166	5.65271E-05		
		Total Weight (Kg) =	0.004580191	0.0046	0.431%	
HFH Small Cavity	256	Header	0.179548455	0.01059695		
		Lid	0.0075615	0.000995547		
		L/F	0.012676044	0.001668928		
		Tie Bars	0.0946659	0.005587181		
		Wire	4.71239E-05	2.08476E-06		
		Silicon	0.0026325	0.000100404		
		Die Attach	0.0009604	0.000125812		
		Solder	0.00272384	0.000375386		
		Total Weight (Kg) =	0.019452293			
HFH Large Cavity	256	Header	0.173149455	0.010219281		
		Lid	0.0113535	0.001494802		
		L/F	0.012676044	0.001668928		
		Tie Bars	0.0946659	0.005587181		
		Wire	4.71239E-05	2.08476E-06		
		Silicon	0.0026325	0.000100404		
		Die Attach	0.0009604	0.000125812		
		Solder	0.00272384	0.000375386		
		Total Weight (Kg) =	0.019573879			
FK	20	Header	0.0042548	0.000251118		
		Lid	0.0018	0.000106236		
		Seal Glass	0.000336	3.77165E-05		
		Wire	3.68155E-06	1.62872E-07		
		Silicon	0.000082992	3.16531E-06		
		Die Attach	0.0000576	7.5456E-06		
		Solder	0.000175929	2.42457E-05		
		Total Weight (Kg) =	0.00043019	0.0005	13.962%	
FK Small Cavity	28	Header	0.0063862	0.000376914		
		Lid	0.003042	0.000179539		
		Seal Glass	0.000288	3.23284E-05		
		Wire	5.15418E-06	2.28021E-07		
		Silicon	0.000219232	8.36151E-06		
		Die Attach	0.000096	0.000012576		
		Solder	0.000246301	3.3944E-05		
		Total Weight (Kg) =	0.00064389	0.0008	19.514%	

Pkg	Pin	Component	Volume(cubic inches)	Component Weight (Kg)	True Weight (Kg)	Percent Error
FK 28 Large Cavity		Header	0.00496146	0.000292825		
		Lid	0.0016	0.000210656		
		Seal Ring	0.00087246	0.000275959		
		Wire	5.15418E-06	2.28021E-07		
		Silicon	0.000219232	8.36151E-06		
		Die Attach	0.000096	0.000012576		
		Solder	0.000246301	3.3944E-05		
		Total Weight (Kg) =		0.00083455	0.0008	4.319%
GB 84		Header	0.087096	0.005140406		
		Lid	0.004761	0.000626833		
		Pins	0.006634949	0.000873557		
		Wire	1.54625E-05	6.84062E-07		
		Silicon	0.001428596	5.44867E-05		
		Die Attach	0.0006084	7.97004E-05		
		Solder	0.000427508	5.8917E-05		
		Total Weight (Kg) =		0.006834585	0.0073	6.376%
HFG 100		Header	0.0346374	0.002044299		
		Lid	0.0036	0.000473976		
		L/F	0.01086	0.001429828		
		Tie Bars	0.0945	0.00557739		
		Wire	1.84078E-05	8.1436E-07		
		Silicon	0.001798992	6.86136E-05		
		Die Attach	0.000678976	8.89459E-05		
		Solder	0.001544	0.000212786		
	Total Weight (Kg) =		0.009896653	0.0097	2.027%	
HFN 408		Header				
		Lid				
		L/F				
		Wire	7.51037E-05	3.32259E-06		
		Silicon	0.00619008	0.00023609		
		Die Attach	0.00222976	0.000292099		
		Solder				
	Total Weight (Kg) =		0.000531511	0.063	99.156%	
HFH 288		Header	0.21129658	0.012470724		
		Lid	0.012696	0.001671555		
		L/F	0.011597484	0.001526925		
		Tie Bars	0.06111728	0.003607142		
		Wire	5.30144E-05	2.34536E-06		
		Silicon	0.002370277	9.04024E-05		
		Die Attach	0.0008649	0.000113302		
		Solder	0.00250848	0.000345706		
	Total Weight (Kg) =		0.019828102			
FK 44		Header	0.0231705	0.001367523		
		Lid	0.00225625	0.000297058		
		Wire	8.09942E-06	3.58318E-07		
		Silicon	0.000421148	1.60626E-05		
		Die Attach	0.000193584	2.53595E-05		
		Solder	0.000387044	5.33405E-05		
	Total Weight (Kg) =		0.001759702	0.0019	7.384%	

Multi-Layered Ceramic Packages

Pin	132	352	320	196	164	84	44				
Package Group	HFG MIL	HFH MIL	HFH MIL	HFG MIL	HFG MIL	HFG MIL	FJ MIL				
Description											
Comments											
Body Size	24.13 X 24.13 X 2.51	48.01 X 48.01 X 3.00	43.99 X 43.99 X 3.30	34.29 X 34.29 X 2.82	28.70 X 28.70 X 2.68	16.51 X 16.51 X 1.91	16.51 X 16.51 X 2.77				
Package Mass	7.9316	28.0626	26.7478	15.2586	12.6730	3.2932	2.2141				
Item	Component	CAS #	Substance	%	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Al2O3	90.000%	3288.176834	18374.33422	13130.70671	8466.817975	5400.560178	1054.100151	1230.770619
NCTB	Ceramic	1344-28-1	Al2O3	90.000%	1799.63784	3247.892673	3247.892673	2528.4168	3346.434	971.395425	
Leadframe	Kovar	7439-89-6	Fe	53.000%	541.8247954	858.9547272	886.461087	637.3463637	765.1634189	276.3803429	129.9352945
Leadframe	Kovar	7440-48-4	Co	29.000%	296.4701711	469.994096	485.0447457	348.7366896	418.6743236	151.2269801	71.09667058
Leadframe	Kovar	7440-02-0	Ni	17.000%	173.7928589	275.5137804	284.3365571	204.4318525	245.4297759	88.65029865	41.67735862
Leadframe	Kovar	7439-96-5	Manganese	0.500%	5.111554674	8.103346483	8.362840444	6.012701544	7.21852282	2.607361725	1.225804665
Leadframe	Kovar	7440-21-3	Silicon	0.200%	2.04462187	3.241338593	3.345136177	2.405080618	2.887409128	1.04294469	0.490321866
Leadframe	Kovar	7440-44-0	Carbon	0.040%	0.408924374	0.648267719	0.669027235	0.481016124	0.577481826	0.208589938	0.098064373
Leadframe	Kovar	7429-90-5	Aluminum	0.100%	1.022310935	1.620669297	1.672568089	1.202540309	1.443704564	0.521472345	0.245160933
Leadframe	Kovar	7439-95-4	Magnesium	0.100%	1.022310935	1.620669297	1.672568089	1.202540309	1.443704564	0.521472345	0.245160933
Leadframe	Kovar	7440-67-7	Zirconium	0.100%	1.022310935	1.620669297	1.672568089	1.202540309	1.443704564	0.521472345	0.245160933
Leadframe	Kovar	7440-32-6	Titanium	0.100%	1.022310935	1.620669297	1.672568089	1.202540309	1.443704564	0.521472345	0.245160933
Leadframe	Kovar	7440-50-8	Copper	0.200%	2.04462187	3.241338593	3.345136177	2.405080618	2.887409128	1.04294469	0.490321866
Leadframe	Kovar	7440-47-3	Chromium	0.200%	2.04462187	3.241338593	3.345136177	2.405080618	2.887409128	1.04294469	0.490321866
Leadframe	Kovar	7439-98-7	Molybdenum	0.200%	2.04462187	3.241338593	3.345136177	2.405080618	2.887409128	1.04294469	0.490321866
Lid	Kovar	7439-89-6	Fe	53.000%	527.6399577	964.6359552	847.82457	792.2449593	604.5721872	181.4972598	
Lid	Kovar	7440-48-4	Co	29.000%	288.7086561	527.8196736	463.90401	433.4925249	330.8036496	99.3098214	
Lid	Kovar	7440-02-0	Ni	17.000%	169.2430053	309.4115328	271.94373	254.1163077	193.9193808	58.2161022	
Lid	Kovar	7439-96-5	Manganese	0.500%	4.97773545	9.1003392	7.998345	7.47400905	5.7035112	1.7122383	
Lid	Kovar	7440-21-3	Silicon	0.200%	1.99109418	3.64013568	3.199338	2.98960362	2.28140448	0.68489532	
Lid	Kovar	7440-44-0	Carbon	0.040%	0.398218836	0.728027136	0.6398676	0.597920724	0.456280896	0.136979064	
Lid	Kovar	7429-90-5	Aluminum	0.100%	0.99554709	1.82006784	1.599669	1.49480181	1.14070224	0.34244766	
Lid	Kovar	7439-95-4	Magnesium	0.100%	0.99554709	1.82006784	1.599669	1.49480181	1.14070224	0.34244766	
Lid	Kovar	7440-67-7	Zirconium	0.100%	0.99554709	1.82006784	1.599669	1.49480181	1.14070224	0.34244766	
Lid	Kovar	7440-32-6	Titanium	0.100%	0.99554709	1.82006784	1.599669	1.49480181	1.14070224	0.34244766	
Lid	Kovar	7440-50-8	Copper	0.200%	1.99109418	3.64013568	3.199338	2.98960362	2.28140448	0.68489532	
Lid	Kovar	7440-47-3	Chromium	0.200%	1.99109418	3.64013568	3.199338	2.98960362	2.28140448	0.68489532	
Lid	Kovar	7439-98-7	Molybdenum	0.200%	1.99109418	3.64013568	3.199338	2.98960362	2.28140448	0.68489532	
Lid	Ceramic	1344-28-1	Al2O3	90.000%							424.944
Die Attach	???	7440-22-4	Silver	79.000%	42.389504	111.934784	143.726912	54.891096	47.853776	42.389504	23.844096
Die Attach	???	lead 7439-92-1 vanadium 1314-62-2 tellurium 10028-16-7	filler (lead, vanadium, tellurium glass)	12.000%	6.438912	17.002752	21.831936	8.337888	7.268928	6.438912	3.621888
Die Attach	???		solvent/binder	9.000%	4.829184	12.752064	16.373952	6.253416	5.451696	4.829184	2.716416
Seal Glass	T187	14808-60-7	SiO2	6.190%							3.960565737
Seal Glass	T187	13463-67-7	TiO2	2.350%							1.503607348
Seal Glass	T187	1344-28-1	Al2O3	3.830%							2.45056006
Seal Glass	T187	1317-60-8	Fe2O3	0.100%							0.063983291
Seal Glass	T187	1308-38-9	Cr2O3	0.080%							0.051186633
Seal Glass	T187	1317-36-8	PbO	58.240%							37.2638689
Seal Glass	T187	1307-96-6	CoO	0.070%							0.044788304
Seal Glass	T187	1305-78-8	CaO	0.030%							0.019194987
Seal Glass	T187	1309-48-4	MgO	1.450%							0.927757725
Seal Glass	T187	12030-88-5	K2O	0.010%							0.006398329
Seal Glass	T187	124-86-4	Na2O	0.020%							0.012796658
Seal Glass	T187	1303-86-2	B2O3	8.150%							5.214638248
Seal Glass	T187	1314-13-2	ZnO	1.800%							1.151699245
Seal Glass	T187	18282-10-5	SnO2	17.800%							11.38902587
Seal Glass	T187	1313-13-9	MnO2	0.030%							0.019194987
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	1.064205283	2.837880755	2.579891595	1.580183602	1.322194442	0.677221544	0.354735094
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.010749548	0.028665462	0.026059511	0.015961451	0.013355499	0.006840622	0.003583183
Leadframe Plating	Solder dipped	7440-31-5	Tin	63.000%	105.2091838	213.1536535	76.79073024	139.3724749	165.8136883	53.8782919	9.361257483
Leadframe Plating	Solder dipped	7439-92-1	Lead	37.000%	61.78952063	125.185479	45.09931776	81.85367572	97.38264236	31.64280635	5.497881379
Leadframe Plating	non-solder dipped	7440-02-0	Nickel	76.000%	79.612632	161.2950768	181.011664	105.464268	125.472546	40.770135	7.083738514
Leadframe Plating	non-solder dipped	7440-57-5	Gold	24.000%	53.65915632	108.7133728	122.0057664	71.08323768	84.56887796	27.4791951	4.774461322
Lid Plating	???	7440-02-0	Nickel	76.000%	33.11937	60.54912	53.217	49.72833	37.94832	17.08857	
Lid Plating	???	7440-57-5	Gold	24.000%	22.3225562	40.8102912	35.86842	33.5170458	25.5772832	11.5177482	
Heat Sink	???	7440-33-7	Tungsten	90.000%			4339.0395				
Heat Sink	???	7440-50-8	Copper	10.000%			482.1155				

Multi-Layered Ceramic Packages

Pin	68	40	68	141	305	68	181
Package	FJ	JD	GB	GFA	GF	GB	GB
Group	MIL	MIL	MIL	MIL	MIL	MIL	MIL
Description							
Comments							
Body Size	24.13 X 24.13 X 3.28	50.80 X 15.49 X 2.41	27.94 X 27.94 X 2.54	26.92 X 26.92 X 2.92	47.24 X 47.24 X 4.19	27.94 X 27.94 X 3.28	40.00 X 40.00 X 3.18
Package Mass	5.5546	6.5806	7.1998	8.5805	37.6682	7.4280	17.6567

Item	Component	CAS #	Substance	%	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Al2O3	90.000%	3410.069364	5210.743005	5226.678405	5335.995249	18187.69116	4706.2548	12291.0537
NCTB	Ceramic	1344-28-1	Al2O3	90.000%							
Leadframe	Kovar	7439-89-6	Fe	53.000%	164.9925408	192.592248	406.512256	728.8572976	1275.894318	374.7977409	997.6233987
Leadframe	Kovar	7440-48-4	Co	29.000%	90.27893743	105.380664	222.4312344	398.80871	698.1308534	205.0780092	545.8694068
Leadframe	Kovar	7440-02-0	Ni	17.000%	52.92213574	61.774872	130.3907236	233.7844162	409.2491209	120.2181433	319.9924109
Leadframe	Kovar	7439-96-5	Manganese	0.500%	1.556533404	1.816908	3.835021283	6.876012242	12.03673885	3.535827745	9.411541497
Leadframe	Kovar	7440-21-3	Silicon	0.200%	0.622613362	0.7267632	1.534008513	2.750404897	4.81469554	1.414331098	3.764616599
Leadframe	Kovar	7440-44-0	Carbon	0.040%	0.124522672	0.14535264	0.306801703	0.550080979	0.962939108	0.28286622	0.75292332
Leadframe	Kovar	7429-90-5	Aluminum	0.100%	0.311306681	0.3633816	0.767004257	1.375202448	2.40734777	0.707165549	1.882308299
Leadframe	Kovar	7439-95-4	Magnesium	0.100%	0.311306681	0.3633816	0.767004257	1.375202448	2.40734777	0.707165549	1.882308299
Leadframe	Kovar	7440-67-7	Zirconium	0.100%	0.311306681	0.3633816	0.767004257	1.375202448	2.40734777	0.707165549	1.882308299
Leadframe	Kovar	7440-32-6	Titanium	0.100%	0.311306681	0.3633816	0.767004257	1.375202448	2.40734777	0.707165549	1.882308299
Leadframe	Kovar	7440-50-8	Copper	0.200%	0.622613362	0.7267632	1.534008513	2.750404897	4.81469554	1.414331098	3.764616599
Leadframe	Kovar	7440-47-3	Chromium	0.200%	0.622613362	0.7267632	1.534008513	2.750404897	4.81469554	1.414331098	3.764616599
Leadframe	Kovar	7439-98-7	Molybdenum	0.200%	0.622613362	0.7267632	1.534008513	2.750404897	4.81469554	1.414331098	3.764616599
Lid	Kovar	7439-89-6	Fe	53.000%		177.955935	255.411513	527.6399577	847.82457		
Lid	Kovar	7440-48-4	Co	29.000%		97.37211535	139.7534694	288.7086561	463.90401		
Lid	Kovar	7440-02-0	Ni	17.000%		57.08020555	81.92444755	169.2430053	271.94373		
Lid	Kovar	7439-96-5	Manganese	0.500%		1.678829575	2.409542575	4.97773545	7.998345		
Lid	Kovar	7440-21-3	Silicon	0.200%		0.67153183	0.96381703	1.99109418	3.199338		
Lid	Kovar	7440-44-0	Carbon	0.040%		0.134306366	0.192763406	0.398218836	0.6398676		
Lid	Kovar	7429-90-5	Aluminum	0.100%		0.335765915	0.481908515	0.99554709	1.599669		
Lid	Kovar	7439-95-4	Magnesium	0.100%		0.335765915	0.481908515	0.99554709	1.599669		
Lid	Kovar	7440-67-7	Zirconium	0.100%		0.335765915	0.481908515	0.99554709	1.599669		
Lid	Kovar	7440-32-6	Titanium	0.100%		0.335765915	0.481908515	0.99554709	1.599669		
Lid	Kovar	7440-50-8	Copper	0.200%		0.67153183	0.96381703	1.99109418	3.199338		
Lid	Kovar	7440-47-3	Chromium	0.200%		0.67153183	0.96381703	1.99109418	3.199338		
Lid	Kovar	7439-98-7	Molybdenum	0.200%		0.67153183	0.96381703	1.99109418	3.199338		
Lid	Ceramic	1344-28-1	Al2O3	90.000%	579.3693205					579.3693205	1695.659355
Die Attach	???	7440-22-4	Silver	79.000%	42.389504	30.177684	42.389504	80.142856	144.099476	47.853776	47.853776
Die Attach	???	lead 7439-92-1 vanadium 1314-62-2 tellurium 10028-16-7	filler (lead, vanadium, tellurium glass)	12.000%	6.438912	4.583952	6.438912	12.173568	21.888528	7.268928	7.268928
Die Attach	???		solvent/binder	9.000%	4.829184	3.437964	4.829184	9.130176	16.416396	5.451696	5.451696
Seal Glass	T187	14808-60-7	SiO2	6.190%	11.46896457						
Seal Glass	T187	13463-67-7	TiO2	2.350%	4.35413033						
Seal Glass	T187	1344-28-1	Al2O3	3.830%	7.096306027						
Seal Glass	T187	1317-60-8	Fe2O3	0.100%	0.185282142						
Seal Glass	T187	1308-38-9	Cr2O3	0.080%	0.148225713						
Seal Glass	T187	1317-36-8	PbO	58.240%	107.9083193						
Seal Glass	T187	1307-96-6	CoO	0.070%	0.129697499						
Seal Glass	T187	1305-78-8	CaO	0.030%	0.055584643						
Seal Glass	T187	1309-48-4	MgO	1.450%	2.686591055						
Seal Glass	T187	12030-88-5	K2O	0.010%	0.018528214						
Seal Glass	T187	124-86-4	Na2O	0.020%	0.037056428						
Seal Glass	T187	1303-86-2	B2O3	8.150%	15.10049455						
Seal Glass	T187	1314-13-2	ZnO	1.800%	3.33507855						
Seal Glass	T187	18282-10-5	SnO2	17.800%	32.98022122						
Seal Glass	T187	1313-13-9	MnO2	0.030%	0.055584643						
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	0.548226964	0.322486449	0.548226964	1.136764734	2.458959177	0.548226964	1.459251183
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.005537646	0.003257439	0.005537646	0.011482472	0.024837971	0.005537646	0.014739911
Leadframe Plating	Solder dipped	7440-31-5	Tin	63.000%	14.46739793	17.0173962	31.71698772	62.30473293	119.7979104	30.04767262	79.97983448
Leadframe Plating	Solder dipped	7439-92-1	Lead	37.000%	8.496725768	9.9943438	18.62743726	36.59166855	70.35750296	17.64704582	46.97228374
Leadframe Plating	non-solder dipped	7440-02-0	Nickel	76.000%	10.94759588	12.8772	24.00049867	47.14649042	90.65203832	22.73731453	60.52138132
Leadframe Plating	non-solder dipped	7440-57-5	Gold	24.000%	7.378712952	8.679272	16.17640916	31.77687806	61.09974979	15.32501921	40.79159525
Lid Plating	???	7440-02-0	Nickel	76.000%		16.7551425	24.0478425	33.11937	53.217		
Lid Plating	???	7440-57-5	Gold	24.000%		11.29301705	7.481551	22.3225562	35.86842		
Heat Sink	???	7440-33-7	Tungsten	90.000%					11634.876		
Heat Sink	???	7440-50-8	Copper	10.000%					1292.764		

Multi-Layered Ceramic Packages

Pin	132	145	429	68	256	20	28
Package	GB	GB	GLP	FD	HFH	FK	FK
Group	MIL	MIL	MIL	MIL	MIL	MIL	MIL
Description							
Comments							
Body Size	35.56 X 35.56 X 2.54	40.00 X 40.00 X 2.41	27.00 X 27.00 X 2.38	24.13 X 24.13 X 2.29	35.99 X 35.99 X 2.79	8.89 X 8.89 X 2.06	11.43 X 11.43 X 1.78
Package Mass	12.0020	13.8799	4.7085	4.5802	19.5739	0.4302	0.8345

Item	Component	CAS #	Substance	%	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Al2O3	90.000%	8891.9532	9638.2611	2622.947999	3569.5296	9197.352751	226.0064664	263.5428323
NCTB	Ceramic	1344-28-1	Al2O3	90.000%					5028.463276		
Leadframe	Kovar	7439-89-6	Fe	53.000%	776.3797457	852.8413873			884.5318151		
Leadframe	Kovar	7440-48-4	Co	29.000%	424.811559	466.649061			483.9891064		
Leadframe	Kovar	7440-02-0	Ni	17.000%	249.0274656	273.5528978			283.717752		
Leadframe	Kovar	7439-96-5	Manganese	0.500%	7.324337224	8.045673465			8.344639765		
Leadframe	Kovar	7440-21-3	Silicon	0.200%	2.929734889	3.218269386			3.337855906		
Leadframe	Kovar	7440-44-0	Carbon	0.040%	0.585946978	0.643653877			0.667571181		
Leadframe	Kovar	7429-90-5	Aluminum	0.100%	1.464867445	1.609134693			1.668927953		
Leadframe	Kovar	7439-95-4	Magnesium	0.100%	1.464867445	1.609134693			1.668927953		
Leadframe	Kovar	7440-67-7	Zirconium	0.100%	1.464867445	1.609134693			1.668927953		
Leadframe	Kovar	7440-32-6	Titanium	0.100%	1.464867445	1.609134693			1.668927953		
Leadframe	Kovar	7440-50-8	Copper	0.200%	2.929734889	3.218269386			3.337855906		
Leadframe	Kovar	7440-47-3	Chromium	0.200%	2.929734889	3.218269386			3.337855906		
Leadframe	Kovar	7439-98-7	Molybdenum	0.200%	2.929734889	3.218269386			3.337855906		
Lid	Kovar	7439-89-6	Fe	53.000%	242.9034838	653.2435977	622.6268731	255.411513	792.2449593		111.64768
Lid	Kovar	7440-48-4	Co	29.000%	132.9094534	357.4351761	340.6826287	139.7534694	433.4925249		61.09024
Lid	Kovar	7440-02-0	Ni	17.000%	77.9124382	209.5309653	199.7105065	81.92444755	254.1163077		35.81152
Lid	Kovar	7439-96-5	Manganese	0.500%	2.2915423	6.16267545	5.873838425	2.409542575	7.47400905		1.05328
Lid	Kovar	7440-21-3	Silicon	0.200%	0.91661692	2.46507018	2.34953537	0.96381703	2.98960362		0.421312
Lid	Kovar	7440-44-0	Carbon	0.040%	0.183323384	0.493014036	0.469907074	0.192763406	0.597920724		0.0842624
Lid	Kovar	7429-90-5	Aluminum	0.100%	0.45830846	1.23253509	1.174767685	0.481908515	1.49480181		0.210656
Lid	Kovar	7439-95-4	Magnesium	0.100%	0.45830846	1.23253509	1.174767685	0.481908515	1.49480181		0.210656
Lid	Kovar	7440-67-7	Zirconium	0.100%	0.45830846	1.23253509	1.174767685	0.481908515	1.49480181		0.210656
Lid	Kovar	7440-32-6	Titanium	0.100%	0.45830846	1.23253509	1.174767685	0.481908515	1.49480181		0.210656
Lid	Kovar	7440-50-8	Copper	0.200%	0.91661692	2.46507018	2.34953537	0.96381703	2.98960362		0.421312
Lid	Kovar	7440-47-3	Chromium	0.200%	0.91661692	2.46507018	2.34953537	0.96381703	2.98960362		0.421312
Lid	Kovar	7439-98-7	Molybdenum	0.200%	0.91661692	2.46507018	2.34953537	0.96381703	2.98960362		0.421312
Lid	Ceramic	1344-28-1	Al2O3	90.000%					95.6124		
Die Attach	???	7440-22-4	Silver	79.000%	47.853776	99.391796		34.814036	99.391796	5.961024	9.93504
Die Attach	???	lead 7439-92-1 vanadium 1314-62-2 tellurium 10028-16-7	filler (lead, vanadium, tellurium glass)	12.000%	7.268928	15.097488		5.288208	15.097488	0.905472	1.50912
Die Attach	???		solvent/binder	9.000%	5.451696	11.323116		3.966156	11.323116	0.679104	1.13184
Seal Glass	T187	14808-60-7	SiO2	6.190%					2.334649276		
Seal Glass	T187	13463-67-7	TiO2	2.350%					0.886336963		
Seal Glass	T187	1344-28-1	Al2O3	3.830%					1.444540667		
Seal Glass	T187	1317-60-8	Fe2O3	0.100%					0.037716467		
Seal Glass	T187	1308-38-9	Cr2O3	0.080%					0.030173173		
Seal Glass	T187	1317-36-8	PbO	58.240%					21.96607009		
Seal Glass	T187	1307-96-6	CoO	0.070%					0.026401527		
Seal Glass	T187	1305-78-8	CaO	0.030%					0.01131494		
Seal Glass	T187	1309-48-4	MgO	1.450%					0.546888764		
Seal Glass	T187	12030-88-5	K2O	0.010%					0.003771647		
Seal Glass	T187	124-86-4	Na2O	0.020%					0.007543293		
Seal Glass	T187	1303-86-2	B2O3	8.150%					3.07389202		
Seal Glass	T187	1314-13-2	ZnO	1.800%					0.678896397		
Seal Glass	T187	18282-10-5	SnO2	17.800%					6.713531037		
Seal Glass	T187	1313-13-9	MnO2	0.030%					0.01131494		
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	1.064205283	1.169013379		0.548226964	2.063913276	0.161243225	0.225740515
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.010749548	0.011808216		0.005537646	0.020847609	0.001628719	0.002280207
Leadframe Plating	Solder dipped	7440-31-5	Tin	63.000%	58.32783509	64.07224309	327.1996642	35.61205644	236.493186	15.27477911	21.38469075
Leadframe Plating	Solder dipped	7439-92-1	Lead	37.000%	34.25603013	37.62973007	192.1648822	20.91501727	138.8928236	8.970902017	12.55926282
Leadframe Plating	non-solder dipped	7440-02-0	Nickel	76.000%	44.13713997	48.48397951			178.956288		
Leadframe Plating	non-solder dipped	7440-57-5	Gold	24.000%	29.7485667	32.67834978			120.6170829		
Lid Plating	???	7440-02-0	Nickel	76.000%	22.87017	4.100337		24.0478425	24.864165		10.512
Lid Plating	???	7440-57-5	Gold	24.000%	15.4145642	27.6363962		16.20831905	33.5170458		7.08512
Heat Sink	???	7440-33-7	Tungsten	90.000%							
Heat Sink	???	7440-50-8	Copper	10.000%							

Pressed Ceramic Packages

Pin					8	10	14	16
Package					JG	U	W	W
Group					MIL	MIL	MIL	MIL
Description								
Comments								
Body Size					9.65 X 6.30 X 3.25	6.12 X 6.12 X 1.24	8.64 X 6.12 X 1.45	9.91 X 6.76 X 0.94
Package Mass					1.0564	0.2599	0.3946	0.5307
Item	Component	CAS #	Substance	%	Amount	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Aluminum Oxide	90.000%	602.3841478	122.2388067	204.1101644	282.6918447
Lead Frame	Alloy 42	7439-89-6	Iron	58.000%	105.9304762	25.963352	36.3486928	41.5413632
Lead Frame	Alloy 42	7440-02-0	Nickel	41.000%	74.88188832	18.353404	25.6947656	29.3654464
Lead Frame	Alloy 42	7439-96-5	Manganese	0.800%	1.461110016	0.3581152	0.50136128	0.57298432
Lead Frame	Alloy 42	7440-21-3	Silicon	0.300%	0.547916256	0.1342932	0.18801048	0.21486912
Lead Frame	Alloy 42	7440-44-0	Carbon	0.050%	0.091319376	0.0223822	0.03133508	0.03581152
Lead Frame	Alloy 42	7440-47-3	Chromium	0.250%	0.45659688	0.111911	0.1566754	0.1790576
Lead Frame	Alloy 42	7723-14-0	Phosphorus	0.025%	0.045659688	0.0111911	0.01566754	0.01790576
Lead Frame	Alloy 42	7704-34-9	Sulfur	0.025%	0.045659688	0.0111911	0.01566754	0.01790576
Lead Frame	Alloy 42	7429-90-5	Aluminum	0.100%	0.182638752	0.0447644	0.06267016	0.07162304
Die Attach	????	7440-22-4	Silver	79.000%	3.72564	2.980512	2.980512	2.980512
Die Attach	????	lead 7439-92-1	filler (lead,					
Die Attach	????	vanadium 1314-62-2	vanadium, tellurium	12.000%	0.56592	0.452736	0.452736	0.452736
Die Attach	????	tellurium 10028-16-7	glass)	9.000%	0.42444	0.339552	0.339552	0.339552
Seal Glass	T187	14808-60-7	SiO2	6.190%	12.02059495	3.911204581	5.285201267	7.636339004
Seal Glass	T187	13463-67-7	TiO2	2.350%	4.563553816	1.484867652	3.975369689	2.899094775
Seal Glass	T187	1344-28-1	Al2O3	3.830%	7.437621752	2.420018343	1.419328574	4.724907655
Seal Glass	T187	1317-60-8	Fe2O3	0.100%	0.194193779	0.063185858	0.065843408	0.123365735
Seal Glass	T187	1308-38-9	Cr2O3	0.080%	0.155355024	0.050548686	0.003109448	0.098692588
Seal Glass	T187	1317-36-8	PbO	58.240%	113.0984571	36.79944342	9.26444297	71.84820413
Seal Glass	T187	1307-96-6	CoO	0.070%	0.135935646	0.0442301	0.278886364	0.086356015
Seal Glass	T187	1305-78-8	CaO	0.030%	0.058258134	0.018955757	0.003820232	0.037009721
Seal Glass	T187	1309-48-4	MgO	1.450%	2.815809802	0.916194934	7.959500488	1.788803159
Seal Glass	T187	12030-88-5	K2O	0.010%	0.019419378	0.006318586	0.005977981	0.012336574
Seal Glass	T187	124-86-4	Na2O	0.020%	0.038838756	0.012637172	0.06282041	0.024673147
Seal Glass	T187	1303-86-2	B2O3	8.150%	15.82679302	5.149647388	10.05430741	10.05430741
Seal Glass	T187	1314-13-2	ZnO	1.800%	3.49548803	1.137345435	4.165745645	2.220583232
Seal Glass	T187	18282-10-5	SnO2	17.800%	34.56649274	11.24708264	11.34148699	21.95910085
Seal Glass	T187	1313-13-9	Mno2	0.030%	0.058258134	0.018955757	0.022438886	0.037009721
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	0.06449729	0.080621612	0.112870257	0.12899458
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.000651488	0.00081436	0.001140104	0.001302976
Leadframe Plating	Solder Dipped	7440-31-5	Tin	63.000%	2.528298864	5.7303477	8.02248678	9.16855632
Leadframe Plating	Solder Dipped	7439-92-1	Lead	37.000%	1.484873936	3.3654423	4.71161922	5.38470768

Pressed Ceramic Packages

Pin Package Group Description Comments Body Size Package Mass	20 W MIL	48 WD MIL	56 WD MIL
	12.60 X 6.73 X 1.57	15.75 X 9.65 X 1.75	18.29 X 9.65 X 1.75
	0.7145	1.5171	1.7235

Item	Component	CAS #	Substance	%	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Aluminum Oxide	90.000%	374.3675901	779.4482202	892.1911752
Lead Frame	Alloy 42	7439-89-6	Iron	58.000%	51.926704	121.8750288	142.1875336
Lead Frame	Alloy 42	7440-02-0	Nickel	41.000%	36.706808	86.1530376	100.5118772
Lead Frame	Alloy 42	7439-96-5	Manganese	0.800%	0.7162304	1.68103488	1.96120736
Lead Frame	Alloy 42	7440-21-3	Silicon	0.300%	0.2685864	0.63038808	0.73545276
Lead Frame	Alloy 42	7440-44-0	Carbon	0.050%	0.0447644	0.10506468	0.12257546
Lead Frame	Alloy 42	7440-47-3	Chromium	0.250%	0.223822	0.5253234	0.6128773
Lead Frame	Alloy 42	7723-14-0	Phosphorus	0.025%	0.0223822	0.05253234	0.06128773
Lead Frame	Alloy 42	7704-34-9	Sulfur	0.025%	0.0223822	0.05253234	0.06128773
Lead Frame	Alloy 42	7429-90-5	Aluminum	0.100%	0.0895288	0.21012936	0.24515092
Die Attach	????	7440-22-4	Silver	79.000%	4.222392	7.14081	7.14081
Die Attach	????	lead 7439-92-1	filler (lead,				
Die Attach	????	vanadium 1314-62-2	vanadium, tellurium	12.000%	0.641376	1.08468	1.08468
Die Attach	????	tellurium 10028-16-7	glass)				
			solvent/binder	9.000%	0.481032	0.81351	0.81351
Seal Glass	T187	14808-60-7	SiO2	6.190%	11.33716806	24.22198624	26.76508635
Seal Glass	T187	13463-67-7	TiO2	2.350%	4.304094498	9.195745989	10.16122018
Seal Glass	T187	1344-28-1	Al2O3	3.830%	7.014758267	14.98710942	16.56062693
Seal Glass	T187	1317-60-8	Fe2O3	0.100%	0.183152957	0.39130834	0.432392348
Seal Glass	T187	1308-38-9	Cr2O3	0.080%	0.146522366	0.313046672	0.345913878
Seal Glass	T187	1317-36-8	PbO	58.240%	106.6682824	227.8979772	251.8253035
Seal Glass	T187	1307-96-6	CoO	0.070%	0.12820707	0.273915838	0.302674644
Seal Glass	T187	1305-78-8	CaO	0.030%	0.054945887	0.117392502	0.129717704
Seal Glass	T187	1309-48-4	MgO	1.450%	2.655717882	5.673970929	6.269689048
Seal Glass	T187	12030-88-5	K2O	0.010%	0.018315296	0.039130834	0.043239235
Seal Glass	T187	124-86-4	Na2O	0.020%	0.036630591	0.078261668	0.08647847
Seal Glass	T187	1303-86-2	B2O3	8.150%	14.92696602	31.89162971	35.23997637
Seal Glass	T187	1314-13-2	ZnO	1.800%	3.296753232	7.043550119	7.783062266
Seal Glass	T187	18282-10-5	SnO2	17.800%	32.60122641	69.65288451	76.96583796
Seal Glass	T187	1313-13-9	Mno2	0.030%	0.054945887	0.117392502	0.129717704
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	0.161243225	0.386983739	0.451481029
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.001628719	0.003908927	0.004560414
Leadframe Plating	Solder Dipped	7440-31-5	Tin	63.000%	8.59552155	18.7538652	21.8795094
Leadframe Plating	Solder Dipped	7439-92-1	Lead	37.000%	5.04816345	11.0141748	12.8498706

Pressed Ceramic Packages

Pin					14	14	16
Package					J	WA	J
Group					MIL	MIL	MIL
Description							
Comments							
Body Size					19.30 X 7.31 X 3.12	6.12 X 4.85 X 1.30	19.30 X 7.32 X 3.12
Package Mass					2.1901	0.2485	2.2484
Item	Component	CAS #	Substance	%	Amount	Amount	Amount
Header	Ceramic	1344-28-1	Aluminum Oxide	90.000%	1319.384191	99.72484868	1319.384191
Lead Frame	Alloy 42	7439-89-6	Iron	58.000%	137.4942759	36.3486928	169.2932731
Lead Frame	Alloy 42	7440-02-0	Nickel	41.000%	97.19422952	25.6947656	119.672831
Lead Frame	Alloy 42	7439-96-5	Manganese	0.800%	1.896472771	0.50136128	2.335079629
Lead Frame	Alloy 42	7440-21-3	Silicon	0.300%	0.711177289	0.18801048	0.875654861
Lead Frame	Alloy 42	7440-44-0	Carbon	0.050%	0.118529548	0.03133508	0.145942477
Lead Frame	Alloy 42	7440-47-3	Chromium	0.250%	0.592647741	0.1566754	0.729712384
Lead Frame	Alloy 42	7723-14-0	Phosphorus	0.025%	0.059264774	0.01566754	0.072971238
Lead Frame	Alloy 42	7704-34-9	Sulfur	0.025%	0.059264774	0.01566754	0.072971238
Lead Frame	Alloy 42	7429-90-5	Aluminum	0.100%	0.237059096	0.06267016	0.291884954
Die Attach	????	7440-22-4	Silver	79.000%	4.056808	1.676538	4.056808
Die Attach	????	lead 7439-92-1	filler (lead,				
Die Attach	????	vanadium 1314-62-2	vanadium, tellurium	12.000%	0.616224	0.254664	0.616224
Die Attach	????	tellurium 10028-16-7	glass)	9.000%	0.462168	0.190998	0.462168
Seal Glass	T187	14808-60-7	SiO2	6.190%	28.414211	3.639985048	28.414211
Seal Glass	T187	13463-67-7	TiO2	2.350%	10.78730143	1.381900624	10.78730143
Seal Glass	T187	1344-28-1	Al2O3	3.830%	17.58100616	2.252203996	17.58100616
Seal Glass	T187	1317-60-8	Fe2O3	0.100%	0.459034103	0.058804282	0.459034103
Seal Glass	T187	1308-38-9	Cr2O3	0.080%	0.367227283	0.047043426	0.367227283
Seal Glass	T187	1317-36-8	PbO	58.240%	267.3414618	34.24761377	267.3414618
Seal Glass	T187	1307-96-6	CoO	0.070%	0.321323872	0.041162997	0.321323872
Seal Glass	T187	1305-78-8	CaO	0.030%	0.137710231	0.017641285	0.137710231
Seal Glass	T187	1309-48-4	MgO	1.450%	6.655994499	0.852662087	6.655994499
Seal Glass	T187	12030-88-5	K2O	0.010%	0.04590341	0.005880428	0.04590341
Seal Glass	T187	124-86-4	Na2O	0.020%	0.091806821	0.011760856	0.091806821
Seal Glass	T187	1303-86-2	B2O3	8.150%	37.41127942	4.792548973	37.41127942
Seal Glass	T187	1314-13-2	ZnO	1.800%	8.26261386	1.058477074	8.26261386
Seal Glass	T187	18282-10-5	SnO2	17.800%	81.7080704	10.46716217	81.7080704
Seal Glass	T187	1313-13-9	Mno2	0.030%	0.137710231	0.017641285	0.137710231
Bond Wire	Aluminum	7429-90-5	Aluminum	99.000%	0.112870257	0.112870257	0.12899458
Bond Wire	Aluminum	7440-21-3	Silicon	1.000%	0.001140104	0.001140104	0.001302976
Leadframe Plating	Solder Dipped	7440-31-5	Tin	63.000%	11.24363678	8.02248678	13.39998398
Leadframe Plating	Solder Dipped	7439-92-1	Lead	37.000%	6.603405725	4.71161922	7.869831861