



## Device Material Content

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**Package:** 285 csfBGA  
**Total Device Weight:** 296.64 Milligrams

**Package Code:**

MG285

**Products:**

LFE5

Assembly: ASEK

Size (mm): 10 x 10

Lead pitch (mm): 0.5

MSL: 3

Reflow max (°C): 260

March, 2021

	% of Total Pkg. Wt.	Weight (mg)	% of Total Pkg. Wt.	Weight (mg)	Substance	CAS #	% of Subst.	Notes / Assumptions:
<b>Die</b>	12.40%	36.798	12.40%	36.798	Silicon chip	7440-21-3	100.00%	Die size: 6.56 x 6.88 mm
<b>Mold Compound</b>	46.10%	136.761	3.58%	10.624	Epoxy Resin	-	7.77%	Sumitomo EME-G760 Type SW
			1.43%	4.249	Phenol Resin A	9003-35-4	3.11%	
			1.43%	4.249	Phenol Resin B	-	3.11%	
			28.65%	84.988	Silica(Amorphous) A	60676-86-0	62.14%	
			9.55%	28.330	Silica(Amorphous) B	7631-86-9	20.71%	
			1.19%	3.541	Metal Hydroxide	-	2.59%	
			0.26%	0.780	Carbon Black	1333-86-4	0.57%	
<b>Substrate</b>	14.02%	41.599	4.49%	13.312	BT resins	-	32.00%	MGC CCL-HL832NS
			9.54%	28.287	Continuous Filament Fiber Glass	65997-17-3	68.00%	
<b>Foil</b>	13.75%	40.778	13.74%	40.762	Copper	7440-50-8	99.96%	
			0.00%	0.002	OSP	-	0.04%	
<b>Solder Mask</b>	1.77%	5.257	0.42%	1.236	Solvent naphtha (petroleum)	64742-94-5	23.52%	PSR4000 AUS 320
			0.10%	0.309	Naphthalene	91-20-3	5.87%	
			0.26%	0.773	Phosphin oxide derivative	-	14.70%	
			0.26%	0.773	Tale	14807-96-6	14.70%	
			0.31%	0.927	Dipropylene glycol monomethyl Ether	34590-94-8	17.63%	
			0.26%	0.773	Epoxy Resin	85954-11-6	14.70%	
			0.16%	0.467	Barium Sulfate	7727-43-7	8.88%	
<b>UBM</b>	0.04%	0.115	0.01%	0.023	Titanium (Ti)	7440-32-6	20.00%	
			0.03%	0.092	Copper (Cu)	7440-50-8	80.00%	
<b>Bump</b>	0.50%	1.473	0.36%	1.070	Tin (Sn)	7440-31-5	72.64%	
			0.01%	0.020	Silver (Ag)	7440-22-4	1.33%	
			0.13%	0.372	Nickel (Ni)	7440-02-0	25.24%	
			0.00%	0.012	Copper (Cu)	7440-50-8	0.78%	
<b>Underfill</b>	1.35%	4.000	0.13%	0.385	N,N-Diglycidyl-4-glycidylloxylaniline	5026-74-4	9.62%	UA-26
			0.13%	0.385	Bisphenol F type liquid epoxy resin	9003-36-5	9.62%	
			0.07%	0.200	Bisphenol A type liquid epoxy resin	25068-38-6	5.00%	
			0.10%	0.289	Amine type hardener	Trade secret	7.22%	
			0.01%	0.040	Carbon black	1333-86-4	1.00%	
			0.84%	2.502	Silicon dioxide	60676-86-0	62.54%	
			0.07%	0.200	Additives	Trade secret	5.00%	
<b>Solder Balls</b>	10.07%	29.861	9.89%	29.338	Tin (Sn)	7440-31-5	98.25%	LF35 (98.25Sn; 1.2Ag, 0.5Cu 0.05Ni)
			0.12%	0.358	Silver (Ag)	7440-22-4	1.20%	
			0.05%	0.149	Copper (Cu)	7440-50-8	0.50%	
			0.01%	0.015	Nickel (Ni)	7440-02-0	0.05%	

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