Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@lscc.com

April, 2018

Package: 256 fpBGA
Total Device Weight 1.071 Grams

Package Code: FN256
Products: LFE2/2M

Assembly: ASEM
Size (mm): 17 x 17 x 1.86
Lead pitch (mm): 1.0
MSL: 3
Reflow max (^oC): 250

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.46%	0.0157	1.46%	0.0157	Silicon chip	7440-21-3	100.00%	Die size: 9.78 x 8.81 mm
Mold Compound	29.72%	0.3184	2.08%	0.0223	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			1.49%	0.0159	Phenol Novolac	9003-35-4	5.00%	
			1.49%	0.0159	Metal Hydroxide	-	5.00%	
			0.15%	0.0016	Carbon Black	1333-86-4	0.50%	
			24.52%	0.2626	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.19%	0.0021	0.15%	0.00165	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00041	Esters & resins	-	20.00%	
Wire	0.29%	0.0031	0.285%	0.00306	Copper	7440-50-8	98.45%	0.8 mil diameter; 1 wire per solder ball
			0.004%	0.00005	Palladium	7440-05-3	1.55%	
Solder Balls	22.65%	0.2426	21.86%	0.2341	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.68%	0.0073	Silver (Ag)	7440-22-4	3.00%	
			0.11%	0.0012	Copper (Cu)	7440-50-8	0.50%	
Substrate	45.68%	0.4892	24.47%	0.2621	Laminate*	-	53.57%	BT Resin CCL-HL832NX-A
			4.24%	0.0455	Solder mask PSR4000 AUS 308	-	9.29%	
			15.42%	0.1651	Copper	7440-50-8	33.75%	
			1.47%	0.0157	Nickel plating	7440-02-0	3.21%	
			0.08%	0.0009	Gold plating	7440-57-5	0.18%	

Notes: * 0.24% max. concentration of Bisphenol A (CAS# 80-05-7) in substrate laminate material as impurity - not intentionally added.

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.
Constituent substances and proportions in epoxy materials are before curing.
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PCN#05A-17
Rev. G1

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April, 2018

Package: 256 fpBGA
Total Device Weight 1.071 **Grams**

Package Code: FN256
Products: LFE2/2M

Assembly: ASET
Size (mm): 17 x 17 x 1.86
Lead pitch (mm): 1.0
MSL: 3
Reflow max (^{o}C): 250

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.46%	0.0157	1.46%	0.0157	Silicon chip	7440-21-3	100.00%	Die size: 9.78 x 8.81 mm
Mold Compound	29.72%	0.3184	1.49%	0.0159	Epoxy Resin	-	5.00%	Mold Compound: Hitachi CEL9750ZHF10AKL-U (ULA)
			1.49%	0.0159	Phenol Resin	-	5.00%	
			0.06%	0.0006	Carbon Black	1333-86-4	0.20%	
			26.10%	0.2795	Silica	60676-86-0	87.80%	
			0.59%	0.0064	Others	-	2.00%	
D/A Epoxy	0.19%	0.0021	0.15%	0.00165	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00041	Esters & resins	-	20.00%	
Wire	0.29%	0.0031	0.285%	0.00306	Copper	7440-50-8	98.45%	0.8 mil diameter; 1 wire per solder ball
			0.004%	0.00005	Palladium	7440-05-3	1.55%	
Solder Balls	22.65%	0.2426	21.86%	0.2341	Tin (Sn)	7440-31-5	96.50%	Ag 3.5
			0.79%	0.0085	Silver (Ag)	7440-22-4	3.50%	
Substrate	45.68%	0.4892	24.47%	0.2621	Laminate*	-	53.57%	BT Resin CCL-HL832NX-A
			4.24%	0.0455	Solder mask PSR4000 AUS 308	-	9.29%	
			15.42%	0.1651	Copper	7440-50-8	33.75%	
			1.47%	0.0157	Nickel plating	7440-02-0	3.21%	
			0.08%	0.0009	Gold plating	7440-57-5	0.18%	

Notes: * 0.24% max. concentration of Bisphenol A (CAS# 80-05-7) in substrate laminate material as impurity - not intentionally added.

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Rev. G1

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April, 2018

Package: 256 fpBGA
Total Device Weight 1.071 **Grams**

Package Code: FN256
Products: LFE2/2M

Assembly: ATP
Size (mm): 17 x 17 x 1.86
Lead pitch (mm): 1.0
MSL: 3
Reflow max (^oC): 250

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.46%	0.0157	1.46%	0.0157	Silicon chip	7440-21-3	100.00%	Die size: 9.78 x 8.81 mm
Mold Compound	29.72%	0.3184	2.08%	0.0223	Epoxy Resin	-	7.00%	Mold Compound: Hitachi GE-110LS-V (ULA)
			1.49%	0.0159	Phenol Novolac	9003-35-4	5.00%	
			1.49%	0.0159	Metal Hydroxide	-	5.00%	
			0.15%	0.0016	Carbon Black	1333-86-4	0.50%	
			24.52%	0.2626	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.19%	0.0021	0.15%	0.00165	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2300
			0.04%	0.00041	Esters & resins	-	20.00%	
Wire	0.29%	0.0031	0.285%	0.00306	Copper	7440-50-8	98.45%	0.8 mil diameter; 1 wire per solder ball
			0.004%	0.00005	Palladium	7440-05-3	1.55%	
Solder Balls	22.65%	0.2426	21.63%	0.2317	Tin (Sn)	7440-31-5	95.50%	SAC405
			0.91%	0.0097	Silver (Ag)	7440-22-4	4.00%	
			0.11%	0.0012	Copper (Cu)	7440-50-8	0.50%	
Substrate	45.68%	0.4892	24.47%	0.2621	Laminate*	-	53.57%	BT Resin CCL-HL832NX-A
			4.24%	0.0455	Solder mask PSR4000 AUS 308	-	9.29%	
			15.42%	0.1651	Copper	7440-50-8	33.75%	
			1.47%	0.0157	Nickel plating	7440-02-0	3.21%	
			0.08%	0.0009	Gold plating	7440-57-5	0.18%	

Notes:

* 0.24% max. concentration of Bisphenol A (CAS# 80-05-7) in substrate laminate material as impurity - not intentionally added.

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