LATTICE SEMICONDUCTOR

Device Material Content

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

June, 2022

Package: **256caBGA**
Total Device Weight **0.532** **Grams**

Package Code: **BN256**
Products: XO

Assembly: ASEM
Size (mm): 14 x 14
Lead pitch (mm): 0.8
MSL: 3
Reflow max (ºC): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.74%	0.0093						Die size: 5.66 x 6.71mm
			1.74%	0.0093	Silicon chip	7440-21-3	100.00%	
Mold Compound	51.18%	0.2723						Mold Compound: Sumitomo G750SE (ULA)
			3.58%	0.0191	Epoxy Resin	-	7.00%	
			2.56%	0.0136	Phenol Novolac	9003-35-4	5.00%	
			2.56%	0.0136	Metal Hydroxide	-	5.00%	
			0.26%	0.0014	Carbon Black	1333-86-4	0.50%	
			42.23%	0.2246	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.28%	0.0015						Die attach epoxy: Henkel (Ablebond) 2100A
			0.22%	0.00120	Silver	7440-22-4	80.00%	
			0.06%	0.00030	Esters & resins	-	20.00%	
Wire	0.65%	0.0035						0.8 mil diameter; 1 wire per solder ball
			0.64%	0.0034	Copper	7440-50-8	98.50%	
			0.01%	0.0001	Palladium	7440-05-3	1.50%	
Solder Balls	18.26%	0.0971						SAC305
			17.62%	0.0937	Tin (Sn)	7440-31-5	96.50%	
			0.55%	0.0029	Silver (Ag)	7440-22-4	3.00%	
			0.09%	0.0005	Copper (Cu)	7440-50-8	0.50%	
Substrate	17.53%	0.0933						BT Resin CCL-HL832NX-A
			5.61%	0.0298	BT Resins	-	32.00%	
			11.92%	0.0634	Glass fiber	65997-17-3	68.00%	
Foil	6.17%	0.0328						
			4.82%	0.0256	Copper	7440-50-8	78.16%	
			1.13%	0.0060	Nickel	7440-02-0	18.31%	
			0.22%	0.0012	Gold	7440-57-5	3.53%	
Solder Mask	4.18%	0.0222						Solder mask PSR4000 AUS 308
			2.35%	0.0125	Quartz	14808-60-7	56.20%	
			0.67%	0.0036	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			0.92%	0.0049	Barium Sulfate	7727-43-7	22.00%	
			0.13%	0.0007	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.12%	0.0006	Trade secret ingredients	-	2.80%	

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Br/Cl/Sb Pb lead-free RoHS

Rev. R1

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Die	1.74%	0.0093	1.74%	0.0093	Silicon chip	7440-21-3	100.00%	Die size: 5.66 x 6.71mm
Mold Compound	51.18%	0.2723	44.78%	0.2383	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KEG-2250LKDS (ULA)
			3.33%	0.0177	Epoxy resin	-	6.50%	
			2.82%	0.0150	Phenol Resin	-	5.50%	
			0.26%	0.0014	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.28%	0.0015	0.22%	0.00120	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.06%	0.00030	Esters & resins	-	20.00%	
Wire	0.65%	0.0035	0.64%	0.0034	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.01%	0.0001	Palladium	7440-05-3	1.50%	
Solder Balls	18.26%	0.0971	17.99%	0.0957	Tin (Sn)	7440-31-5	98.50%	SAC105
			0.18%	0.0010	Silver (Ag)	7440-22-4	1.00%	
			0.09%	0.0005	Copper (Cu)	7440-50-8	0.50%	
Substrate	17.53%	0.0933	5.61%	0.0298	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			11.92%	0.0634	Glass fiber	65997-17-3	68.00%	
Foil	6.17%	0.0328	4.82%	0.0256	Copper	7440-50-8	78.16%	
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			0.12%	0.0006	Trade secret ingredients	-	2.80%	

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