



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Package Code: TSG144		Assembly: ASEM Size (mm): 20 x 20 x 1.4 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260	
Package: 144 TQFP (1.4mm) Total Device Weight 1.400 Grams					Products: XO4			
May, 2026	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.41%	0.0058	0.413%	0.0058	Silicon chip	7440-21-3	100.00%	Die size: 3.15 x 3.05 mm
Mold Compound	72.31%	1.0122	5.42% 2.17% 49.85% 14.46% 0.40%	0.0759 0.0304 0.6979 0.2024 0.0056	Epoxy Resin Phenol Resin Silica (Amorphous) A Silica (Amorphous) B Carbon Black	- - 60676-86-0 7631-86-9 1333-86-4	7.50% 3.00% 68.95% 20.00% 0.55%	Mold Compound: Sumitomo EME-G700SY (ULA)
D/A Epoxy	0.06%	0.0008	0.045% 0.005% 0.001% 0.006% 0.003%	0.00063 0.00006 0.00002 0.00008 0.00004	Silver Epoxy Acylate Substituted Polyamine Bisphenol F 2-Ethylhexyl Glycidyl Ether	7440-22-4 15625-89-5 68490-66-4 28064-14-4 2461-15-6	75.50% 7.50% 2.00% 10.00% 5.00%	Die attach: Yizbond 8143
Wire	0.12%	0.0017	0.12% 0.002% 0.0002%	0.00165 0.00003 0.000003	Copper Palladium Gold	7440-50-8 7440-05-3 7440-57-5	98.28% 1.55% 0.18%	0.8 to 1.0 mil diameter; 1 wire per package lead
Plating	0.65%	0.0091	0.65%	0.0091	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	26.45%	0.3703	25.58% 0.80% 0.04% 0.01% 0.02%	0.3581 0.0111 0.0006 0.0001 0.0003	Copper (Cu) Nickel (Ni) Silicon (Si) Magnesium (Mg) Silver (Ag)	7440-50-8 7440-02-0 7440-21-3 7439-95-4 7440-22-4	96.70% 3.01% 0.17% 0.03% 0.09%	C7025
100.00% 1.400 100.00% 1.400					600.00%			

Notes:

Lattice regards this materials information to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Lattice subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Lattice has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Lattice products.

www.latticesemi.com



Rev. A



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreg@latticesemi.com					Package Code: TSG144		Assembly: ASEK Size (mm): 20 x 20 x 1.4 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260	
May, 2026	Package: 144 TQFP (1.4mm)		Total Device Weight 1.400 Grams		Products: XO4			
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.41%	0.0058	0.413%	0.0058	Silicon chip	7440-21-3	100.00%	Die size: 3.35 x 3.35 mm
Mold Compound	72.31%	1.0122	2.89%	0.0405	Epoxy Resin A	Trade secret	4.00%	Mold Compound: Sumitomo G631SH (ULA)
			2.89%	0.0405	Epoxy Resin B	834893-60-6	4.00%	
			3.62%	0.0506	Phenol Resin	628290-34-6	5.00%	
			0.29%	0.0040	Carbon Black	1333-86-4	0.40%	
			62.62%	0.8766	Silica Fused	60676-86-0	86.60%	
D/A Epoxy	0.06%	0.0008	0.048%	0.00067	Silver (Ag)	7440-22-4	80.00%	Die attach epoxy: Sumitomo CRM-1076WA
			0.001%	0.00002	Epoxy Resin A	7440-22-4	2.00%	
			0.0001%	0.000002	Dicyandiamide	461-58-5	0.20%	
			0.011%	0.00015	Esters & resins	-	17.80%	
Wire	0.12%	0.0017	0.12%	0.00162	Copper	7440-50-8	96.55%	0.8 to 1.0 mil diameter; 1 wire per package lead
			0.004%	0.00005	Palladium	7440-05-3	3.10%	
			0.0004%	0.00001	Gold	7440-57-5	0.35%	
Plating	0.65%	0.0091	0.65%	0.0091	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	26.45%	0.3703	25.58%	0.3581	Copper (Cu)	7440-50-8	96.70%	C7025
			0.80%	0.0111	Nickel (Ni)	7440-02-0	3.01%	
			0.04%	0.0006	Silicon (Si)	7440-21-3	0.17%	
			0.01%	0.0001	Magnesium (Mg)	7439-95-4	0.03%	
			0.02%	0.0003	Silver (Ag)	7440-22-4	0.09%	
100.00%		1.400	100.00%	1.400				

Notes:

Lattice regards this materials information to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Lattice subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Lattice has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Lattice products.

www.latticesemi.com



Rev. A