



Device Material Content

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

August, 2018

Package: 100 TQFP (1.4mm)
Total Device Weight 0.654 Grams

Package Code:

TN100, TG100

Products:

(LC) 4kZE, XO, XO2

Assembly: ASEM

Size (mm): 14 x 14 x 1.4

Lead pitch (mm): 0.5

MSL: 3

Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.09%	0.0071			Silicon chip	7440-21-3	100.00%	Die size: 3.35 x 3.35 mm
Mold Compound	75.90%	0.4961	5.69%	0.0372	Epoxy Resin	-	7.50%	Mold Compound: Sumitomo EME-G700SY (ULA)
			2.28%	0.0149	Phenol Resin	-	3.00%	
			52.33%	0.3421	Silica (Amorphous) A	60676-86-0	68.95%	
			15.18%	0.0992	Silica (Amorphous) B	7631-86-9	20.00%	
			0.42%	0.0027	Carbon Black	1333-86-4	0.55%	
D/A Epoxy	0.15%	0.0010	0.12%	0.00076	Silver	7440-22-4	75.50%	Die attach: Yizbond 8143
			0.01%	0.00008	Epoxy Acylate	15625-89-5	7.50%	
			0.00%	0.00002	Substituted Polyamine	68490-66-4	2.00%	
			0.02%	0.00010	Bisphenol F	28064-14-4	10.00%	
			0.01%	0.00005	2-Ethylhexyl Glycidyl Ether	2461-15-6	5.00%	
Wire	0.24%	0.0016	0.24%	0.0016	Copper (Cu)	7440-50-8	100.00%	0.8 mil wire diameter; 1 wire for each package lead
Plating	1.02%	0.0067	1.02%	0.0067	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	21.59%	0.1411	20.88%	0.1365	Copper (Cu)	7440-50-8	96.70%	C7025
			0.65%	0.0042	Nickel (Ni)	7440-02-0	3.01%	
			0.04%	0.0002	Silicon (Si)	7440-21-3	0.17%	
			0.01%	0.0000	Magnesium (Mg)	7439-95-4	0.03%	
			0.02%	0.0001	Silver (Ag)	7440-22-4	0.09%	

Notes:

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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Device Material Content

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December, 2017

Package: 100 TQFP (1.4mm)
Total Device Weight 0.654 Grams

Package Code:

TN100, TG100

Products:

(LC) 4kZE, XO, XO2

Assembly: ASET

Size (mm): 14 x 14 x 1.4

Lead pitch (mm): 0.5

MSL: 3

Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.09%	0.0071			Silicon chip	7440-21-3	100.00%	Die size: 3.35 x 3.35 mm
Mold Compound	75.90%	0.4961	3.04%	0.0198	Epoxy Resin A	-	4.00%	Mold Compound: Sumitomo EME-G631SH
			3.04%	0.0198	Epoxy Resin B	834893-60-6	4.00%	
			3.80%	0.0248	Phenol Resin	628290-34-6	5.00%	
			0.30%	0.0020	Carbon Black	1333-86-4	0.40%	
			65.73%	0.4297	Silica Fused	60676-86-0	86.60%	
D/A Epoxy	0.15%	0.0010	0.12%	0.00080	Silver (Ag)	7440-22-4	80.00%	Die attach epoxy: Sumitomo CRM-1076WA
			0.00%	0.00002	Epoxy Resin A	-	2.00%	
			0.00%	0.00000	Dicyandiamide	461-58-5	0.20%	
			0.03%	0.00018	others	-	17.80%	
Wire	0.24%	0.0016	0.24%	0.00157	Copper (Cu)	7440-50-8	98.50%	0.8 mil wire diameter; 1 wire for each package lead
			0.00%	0.00002	Palladium	7440-05-3	1.50%	
Plating	1.02%	0.0067	1.02%	0.0067	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	21.59%	0.1411	20.88%	0.1365	Copper (Cu)	7440-50-8	96.70%	C7025
			0.65%	0.0042	Nickel (Ni)	7440-02-0	3.01%	
			0.04%	0.0002	Silicon (Si)	7440-21-3	0.17%	
			0.01%	0.0000	Magnesium (Mg)	7439-95-4	0.03%	
			0.02%	0.0001	Silver (Ag)	7440-22-4	0.09%	

Notes:

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August, 2018					Products: XO, XO2			
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			2.28%	0.0149	Phenol Resin	-	3.00%	
			52.33%	0.3421	Silica (Amorphous) A	60676-86-0	68.95%	
			15.18%	0.0992	Silica (Amorphous) B	7631-86-9	20.00%	
			0.42%	0.0027	Carbon Black	1333-86-4	0.55%	
D/A Epoxy	0.15%	0.0010	0.12%	0.00080	Silver (Ag)	7440-22-4	80.00%	Die attach: Ablebond 3230
			0.03%	0.00020	Esters & resins	-	20.00%	
Wire	0.24%	0.0016	0.24%	0.00157	Copper (Cu)	7440-50-8	98.50%	0.8 mil wire diameter; 1 wire for each package lead
			0.00%	0.00002	Palladium	7440-05-3	1.50%	
Plating	1.02%	0.0067	1.02%	0.0067	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
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			0.02%	0.0001	Silver (Ag)	7440-22-4	0.09%	

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