



Device Material Content

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

December, 2017

Package: **44 TQFP (1.0mm)**
Total Device Weight **0.280 Grams**

Package Code:

TN44, VN

Products:

LC4k, M4A

Assembly: ASEM

Size (mm): 10 x 10 x 1.0

Lead pitch (mm): 0.8

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	1.52%	0.0043			Silicon chip	7440-21-3	100.00%	Die size: 2.1 x 3.0 mm
Mold Compound	72.31%	0.2025	4.34%	0.0121	Epoxy Resin	-	6.00%	Mold Compound: Hitachi CEL9220HF
			3.62%	0.0101	Phenol Resin	-	5.00%	
			0.14%	0.0004	Carbon Black	1333-86-4	0.20%	
			61.61%	0.1725	Silica	60676-86-0	85.20%	
			2.60%	0.0073	Others	-	3.60%	
D/A Epoxy	0.23%	0.0006	0.18%	0.00052	Silver	7440-22-4	80.00%	Die attach: Henkel (Ablebond) 3230
			0.05%	0.00013	Esters & resins	-	20.00%	
Wire	0.46%	0.0013	0.46%	0.0013	Gold (Au)	7440-57-5	100.00%	0.8 to 1.0 mil diameter; 1 wire per package lead
Plating	2.71%	0.0076	2.71%	0.0076	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	22.78%	0.0638	22.03%	0.0617	Copper (Cu)	7440-50-8	96.70%	C7025
			0.69%	0.0019	Nickel (Ni)	7440-02-0	3.01%	
			0.04%	0.0001	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.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

www.latticesemi.com





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Die	1.52%	0.0043			Silicon chip	7440-21-3	100.00%	Die size: 2.1 x 3.0 mm
Mold Compound	72.31%	0.2025	5.06%	0.0142	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G700 series
			3.62%	0.0101	Phenol Resin	-	5.00%	
			0.36%	0.0010	Carbon Black	1333-86-4	0.50%	
			63.27%	0.1772	Silica Fused	60676-86-0	87.50%	
D/A Epoxy	0.23%	0.0006	0.18%	0.00052	Silver	7440-22-4	80.00%	Die attach: Sumitomo CRM1076NS
			0.02%	0.00006	Epoxy Resin	9003-36-5	10.00%	
			0.01%	0.00003	Diluent	26447-14-3	5.00%	
			0.00%	0.000003	Dicyandiamide	461-58-5	0.50%	
			0.01%	0.00003	Hardener	620-92-8	4.50%	
Wire	0.46%	0.0013	0.46%	0.0013	Gold (Au)	7440-57-5	100.00%	0.8 to 1.0 mil diameter; 1 wire per package lead
Plating	2.71%	0.0076	2.71%	0.0076	Tin (Sn)	7440-31-5	100.00%	Plating is 100% Matte Sn; thickness is >10.2µm
Leadframe	22.78%	0.0638	22.03%	0.0617	Copper (Cu)	7440-50-8	96.70%	C7025
			0.69%	0.0019	Nickel (Ni)	7440-02-0	3.01%	
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