Device Material Content

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

December, 2017

Package: 64 TQFP (1.4mm)
Total Device Weight 0.340 Grams
Package Code: TN64
Products: ispPAC-CLK

Assembly: ASEM
Size (mm): 10 x 10 x 1.4
Lead pitch (mm): 0.5
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	2.07%	0.0070			Silicon chip	7440-21-3	100.00%	Die size: 2.8 x 3.0 mm
Mold Compound	75.35%	0.2562						Mold Compound: Hitachi CEL9220HF
			4.52%	0.0154	Epoxy Resin	-	6.00%	
			3.77%	0.0128	Phenol Resin	-	5.00%	
			0.15%	0.0005	Carbon Black	1333-86-4	0.20%	
			64.20%	0.2183	Silica	60676-86-0	85.20%	
			2.71%	0.0092	Others	-	3.60%	
D/A Epoxy	0.25%	0.0009						Die attach epoxy: Henkel (Ablebond) 3230
			0.20%	0.00068	Silver	7440-22-4	80.00%	
			0.05%	0.00017	Esters & resins	-	20.00%	
Wire	0.55%	0.0019						0.8 to 1.0 mil diameter; 1 wire per package lead
			0.55%	0.0019	Copper (Cu)	7440-50-8	100.00%	
Plating	3.02%	0.0103						Plating is 100% Matte Sn (annealed)
			3.02%	0.0103	Tin (Sn)	7440-31-5	100.00%	
Leadframe	18.76%	0.0638						C7025
			18.14%	0.0617	Copper (Cu)	7440-50-8	96.70%	
			0.56%	0.0019	Nickel (Ni)	7440-02-0	3.01%	
			0.03%	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

Rev. D