



Device Material Content

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

Package Code:

MG184

Assembly: ASEM

Size (mm): 8 x 8

Lead pitch (mm): 0.5

MSL: 3

Reflow max (°C): 260

Package: 184 csBGA
Total Device Weight 0.174 Grams

Products:

XO2

April, 2018

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	4.50%	0.0078	4.50%	0.0078	Silicon chip	7440-21-3	100.00%	Die size: 3.63 x 3.73 mm
Mold Compound	49.65%	0.0864	2.48%	0.0043	Epoxy Resin A	-	5.00%	Mold Compound: Sumitomo G750SE (ULA)
			0.74%	0.0013	Epoxy Resin B	-	1.50%	
			2.48%	0.0043	Phenol Novolac	9003-35-4	5.00%	
			2.48%	0.0043	Metal Hydroxide	-	5.00%	
			0.15%	0.0003	Carbon Black	1333-86-4	0.30%	
			41.31%	0.0719	Silica Fused	60676-86-0	83.20%	
D/A Epoxy	0.65%	0.0011	0.52%	0.00090	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.13%	0.00023	Esters & resins	-	20.00%	
Wire	5.29%	0.0092	5.21%	0.0091	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.08%	0.0001	Palladium	7440-05-3	1.50%	
Solder Balls	9.50%	0.0165	9.17%	0.0160	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.29%	0.0005	Silver (Ag)	7440-22-4	3.00%	
			0.05%	0.0001	Copper (Cu)	7440-50-8	0.50%	
Substrate	30.41%	0.0529	20.70%	0.0360	Laminate*	-	68.06%	BT Resin CCL-HL832NX-A
			5.07%	0.0088	Solder mask PSR4000 AUS 308	-	16.67%	
			3.80%	0.0066	Copper	7440-50-8	12.50%	
			0.85%	0.0015	Nickel plating	7440-02-0	2.78%	
			0.03%	0.0001	Gold plating	7440-57-5	0.11%	

Notes: * 0.21% max. concentration of Bisphenol A (CAS# 80-05-7) in substrate laminate material as impurity - not intentionally added.

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.

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Rev. C



Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
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MG184

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MSL: 3

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Total Device Weight 0.174 Grams

Products:

XO2

April, 2018

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Die	4.50%	0.0078	4.50%	0.0078	Silicon chip	7440-21-3	100.00%	Die size: 3.63 x 3.73 mm
Mold Compound	49.65%	0.0864	43.44%	0.0756	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KE-G2250 series (ULA)
			3.23%	0.0056	Epoxy resin	-	6.50%	
			2.73%	0.0048	Phenol Resin	-	5.50%	
			0.25%	0.0004	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.65%	0.0011	0.52%	0.00090	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.13%	0.00023	Esters & resins	-	20.00%	
Wire	5.29%	0.0092	5.21%	0.0091	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.08%	0.0001	Palladium	7440-05-3	1.50%	
Solder Balls	9.50%	0.0165	9.36%	0.0163	Tin (Sn)	7440-31-5	98.50%	SAC105
			0.10%	0.0002	Silver (Ag)	7440-22-4	1.00%	
			0.05%	0.0001	Copper (Cu)	7440-50-8	0.50%	
Substrate	30.41%	0.0529	20.70%	0.0360	Laminate*	-	68.06%	BT Resin CCL-HL832NX-A
			5.07%	0.0088	Solder mask PSR4000 AUS 308	-	16.67%	
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