

16 Leads - FC SOIC
Package Material Declaration



Date	10-Mar-21	Product name	Integrated Circuit
Package Code	DF	RoHS Compliant	Y
Package Name	Plastic Small Outline, 300 mil	Halogen Free	Y
Product Total Mass (g)	0.4514	Plating	Pure Matte Sn

Product Number	MLX91221
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Material Declaration

Part Name	Material Name	Component Weight (g)	Material Component (Element)	CAS #	Element ratio (%)	Material Weight (g)	Ratio total Wt (ppm)
Leadframe	Zirconium Copper C151	0.1411	Copper (Cu)	7440-50-8	99.9	0.14095	312282
			Zirconium (Zr)	7440-67-7	0.1	0.00014	313
Leadframe fixation tape	Polyimide	0.0005	Polyethylene-terephthalate film	25038-59-9	38	0.00018	393
			2-Propenenitrile, polymer with 1,3-butadiene (NBR)	9003-18-3	5	0.00002	52
			Phenol Resin	28453-20-5	3	0.00001	31
			Bismaleimide	79922-55-7	4	0.00002	41
			Polyimide film	-	50	0.00023	517
Die	Silicon	0.0054	Silicon (Si)	7440-21-3	99.99	0.00540	11958
			others	-	0.01	0.0000005	1
Passivation 1	Polyimide	0.00002	Polyimide	-	95	0.00002	42
			others	-	5	0.000001	2
Passivation 2	Polyimide	0.00006	Polyimide	-	95	0.00006	123
			others	-	5	0.000003	6
UBM 1	Titanium	0.000001	Titanium (Ti)	7440-32-6	99.99	0.000001	2
			others	-	0.01	0.000000001	0.0002
	Copper	0.000007	Copper (Cu)	7440-50-8	99.99	0.000007	16
UBM 2	Titanium	0.00000006	others	-	0.01	0.000000001	0.00001
			Titanium (Ti)	7440-32-6	99.99	0.00000006	0.1
	Copper	0.00000047	Copper (Cu)	7440-50-8	99.99	0.00000047	1
			others	-	0.01	0.0000000005	0.0001
Copper plate	Copper	0.00011	Copper (Cu)	7440-50-8	100	0.00011	234
Nickel plate	Nickel	0.0000029	Nickel (Ni)	7440-02-0	100	0.0000029	6
Solder cap	SnAg	0.0000052	Tin (Sn)	7440-31-5	98	0.000005	11
			Silver (Ag)	7440-22-4	1.8	0.0000001	0.2
Lead Finish	Tin	0.0047	Tin (Sn)	7440-31-5	99.99	0.00470	10412
			others	-	0.01	0.0000005	1
Encapsulation	Silica EP G770HCD	0.2995	Silica fused	60676-86-0	76.5	0.22912	507618
			Silicon dioxide	7631-86-9	15.2	0.04552	100860
			Epoxy Resin	-	3.9	0.01168	25879
			Phenol Resin	-	3.9	0.01168	25879
			Carbon Black	1333-86-4	0.5	0.00150	3318

Total package weight (g) 0.4514

Comments

- Composition derived from MSDS and material CoC from vendors
- Component weight based on assembly of generic parts
- Reliability qualification reports are available upon request through the appropriate sales or marketing contact
- Third party testing for RoHS substances are available upon request to environment@melexis.com

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