

**PART INFORMATION**

Mfg Item Number	MKM14Z128CHH5
Mfg Item Name	MAPLGA 44 5*5*0.9 P0.65

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2018-03-21
Response Document ID	007JK00165D042A1.11
Contact Name	Freescale Semiconductor Inc
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**DECLARATION**

EU RoHS	Yes
Pb Free	Yes
HalogenFree	Yes
Plating Indicator	
EU RoHS Exemption(s)	

**MANUFACTURING**

Mfg Item Number	MKM14Z128CHH5
Mfg Item Name	MAPLGA 44 5*5*0.9 P0.65
Version	ALL
Weight	0.097800
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	260 C
Max Time at Peak Temperature	40 seconds
Number of Processing Cycles	3

RoHS	
RoHS Directive	2011/65/EU
RoHS Definition	RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material of Cadmium
RoHS Legal Definition	Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part(s) identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a RoHS restricted substance) in excess of the applicable quantity limit identified below. If a homogeneous material within the part(s) contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Suppliers liability and the Companys remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Suppliers Standard Terms and Conditions of Sale applicable to such part(s) shall apply.
RoHS Declaration	1 - Item(s) do not contain RoHS restricted substances per the definition above
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemption List Version	2012/51/EU
List of Freescale Accepted Exemptions	<p>6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight</p> <p>6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight</p> <p>6(c) : Copper alloy containing up to 4% lead by weight</p> <p>7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)</p> <p>7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications</p> <p>7(c)-I : Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound</p> <p>7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher</p> <p>7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC</p> <p>7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors</p> <p>15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages</p>

MATERIAL COMPOSITION

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%	ARTICLEPPM	ARTICLE%
Non-Conductive Epoxy/Adhesive	0.0005						g				
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.000375	g	75000	7.5	383	0.0383
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Crosslinked acrylate polymer	25767-43-5		0.0001	g	200000	20	1022	0.1022
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Other polymers	-		0.000375	g	75000	7.5	383	0.0383
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other polymers	-		0.0001	g	200000	20	1022	0.1022
Non-Conductive Epoxy/Adhesive		Glass	Silica, vitreous	60676-86-0		0.00225	g	450000	45	2300	0.23
Bonding Wire, Copper	0.0006						g				
Bonding Wire, Copper		Metals	Copper, metal	7440-50-8		0.000582	g	970000	97	8950	0.895
Bonding Wire, Copper		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000018	g	30000	3	184	0.0184
Die Encapsulant, Halogen-free	0.0494						g				
Die Encapsulant, Halogen-free		Metals	Other aluminum compounds	-		0.001482	g	30000	3	15153	1.5153
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000494	g	10000	1	5051	0.5051
Die Encapsulant, Halogen-free		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.001482	g	30000	3	15153	1.5153
Die Encapsulant, Halogen-free		Plastics/polymers	Other phenolic resins	-		0.001482	g	30000	3	15153	1.5153
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		0.04199	g	850000	85	429360	42.936
Die Encapsulant, Halogen-free		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.00247	g	50000	5	25255	2.5255
Organic Substrate	0.0466						g				
Organic Substrate		Solvents, additives, and other materials	Other aromatic amines and their salts	-		0.00001361	g	292	0.0292	139	0.0139
Organic Substrate		Metals	Barium sulfate	7727-43-7		0.0004584	g	9837	0.9837	4687	0.4687
Organic Substrate		Metals	Copper, metal	7440-50-8		0.02212885	g	474868	47.4868	226266	22.6266
Organic Substrate		Plastics/polymers	Other Epoxy resins	-		0.00195068	g	41860	4.186	19945	1.9945
Organic Substrate		Metals	Gold, metal	7440-57-5		0.00108536	g	23291	2.3291	11097	1.1097
Organic Substrate		Metals	Talc	14807-96-6		0.0002309	g	4955	0.4955	2360	0.236
Organic Substrate		Nickel (external applications only)	Nickel	7440-02-0		0.00847002	g	181760	18.176	86605	8.6605
Organic Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.00866984	g	186048	18.6048	88648	8.8648
Organic Substrate		Glass	Silicon dioxide	7631-86-9		0.00153137	g	32862	3.2862	15658	1.5658
Organic Substrate		Solvents, additives, and other materials	Other Aromatic carbonyl compounds	-		0.00008593	g	1844	0.1844	878	0.0878
Organic Substrate		Metals	Copper phthalocyanine	147-14-8		0.0000041	g	88	0.0088	41	0.0041
Organic Substrate		Solvents, additives, and other materials	Quinacridone pigment	1047-16-1		0.0000041	g	88	0.0088	41	0.0041
Organic Substrate		Solvents, additives, and other materials	3-methoxy-3-methyl-1-butyl acetate	103429-90-9		0.00050258	g	10785	1.0785	5138	0.5138
Organic Substrate		Plastics/polymers	Epoxy Resin	115254-47-2		0.00146016	g	31334	3.1334	14930	1.493
Organic Substrate		Solvents, additives, and other materials	1,2,4-Trimethylbenzene	95-63-6		0.0000041	g	88	0.0088	41	0.0041
Silicon Semiconductor Die	0.0007						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000014	g	20000	2	143	0.0143
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.000686	g	980000	98	7014	0.7014

## LINKS

MCD LINK	
NXP website	<a href="http://www.nxp.com">http://www.nxp.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf</a>
China RoHS	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY</a>
REACH signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf</a>
ELV signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf</a>
Conflict Minerals statement	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf</a>
NXP ENVIRONMENTAL INFORMATION	
Environmental Compliance website	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX</a>
FAQ	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ</a>
Technical Service Request	<a href="http://www.nxp.com/support/sales-and-support:SUPPORTHOME">http://www.nxp.com/support/sales-and-support:SUPPORTHOME</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v1.1 Form	<a href="http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcdfs/MKM14Z128CHH5\\_IPC1752\\_v11.xml](http://www.freescale.com/mcdfs/MKM14Z128CHH5_IPC1752_v11.xml)

[http://www.freescale.com/mcdfs/MKM14Z128CHH5\\_IPC1752A.xml](http://www.freescale.com/mcdfs/MKM14Z128CHH5_IPC1752A.xml)