

PART INFORMATION		
Mfg Item Number		MCF52256CVN66
Mfg Item Name		MAPBGA 144 13*13*1.6 P1
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2017-06-08
Response Document ID		5096K00091D025A1.37
Contact Name		Freescale Semiconductor Inc
Contact Title		Product Technical Support
Contact Phone		1-800-521-6274
Contact Email		support@freescale.com
Authorized Representative		Daniel Binyon
Representative Title		EPP Customer Response
Representative Phone		512-895-3406
Representative Email		eppanlst@freescale.com
URL for Additional Information		www.freescale.com
DECLARATION		
EU RoHS		Yes
Pb Free		Yes
HalogenFree		Yes
Plating Indicator		e2
EU RoHS Exemption(s)		
MANUFACTURING		
Mfg Item Number		MCF52256CVN66
Mfg Item Name		MAPBGA 144 13*13*1.6 P1
Version		ALL
Weight		0.443700
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	6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight 6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight 6(c) : Copper alloy containing up to 4% lead by weight 7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead) 7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications 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 7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher 7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC 7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors 15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages

MATERIAL COMPOSITION

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%		ARTICLEPPM	ARTICLE%
Non-Conductive Epoxy/Adhesive	0.0015						g					
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.0001125	g	75000	7.5		253	0.0253
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Crosslinked acrylate polymer	25767-43-5		0.0003	g	200000	20		676	0.0676
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Other polymers	-		0.0001125	g	75000	7.5		253	0.0253
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other polymers	-		0.0003	g	200000	20		676	0.0676
Non-Conductive Epoxy/Adhesive		Glass	Silica, vitreous	60676-86-0		0.000675	g	450000	45		1521	0.1521
Solder Balls - Pb Free, Sn/Ag	0.0734						g					
Solder Balls - Pb Free, Sn/Ag		Metals	Aluminum, metal	7429-90-5		0.00000235	g	32	0.0032		5	0.0005
Solder Balls - Pb Free, Sn/Ag		Antimony/Antimony Compounds	Antimony (metallic)	7440-36-0		0.00000918	g	125	0.0125		20	0.002
Solder Balls - Pb Free, Sn/Ag		Arsenic/Arsenic Compounds	Arsenic	7440-38-2		0.00000551	g	75	0.0075		12	0.0012
Solder Balls - Pb Free, Sn/Ag		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.0000138	g	188	0.0188		31	0.0031
Solder Balls - Pb Free, Sn/Ag		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0.00000095	g	13	0.0013		2	0.0002
Solder Balls - Pb Free, Sn/Ag		Metals	Copper, metal	7440-50-8		0.00000462	g	63	0.0063		10	0.001
Solder Balls - Pb Free, Sn/Ag		Metals	Gold, metal	7440-57-5		0.00000462	g	63	0.0063		10	0.001
Solder Balls - Pb Free, Sn/Ag		Metals	Iridium, metal	7440-74-6		0.00000462	g	63	0.0063		10	0.001
Solder Balls - Pb Free, Sn/Ag		Solvents, additives, and other materials	Sulfur	7704-34-9		0.00000051	g	7	0.0007		1	0.0001
Solder Balls - Pb Free, Sn/Ag		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0		0.00000462	g	63	0.0063		10	0.001
Solder Balls - Pb Free, Sn/Ag		Metals	Iron, metal	7439-89-6		0.00000918	g	125	0.0125		20	0.002
Solder Balls - Pb Free, Sn/Ag		Lead/Lead Compounds	Lead	7439-92-1		0.00002297	g	313	0.0313		51	0.0051
Solder Balls - Pb Free, Sn/Ag		Nickel (external applications only)	Nickel	7440-02-0		0.00000235	g	32	0.0032		5	0.0005
Solder Balls - Pb Free, Sn/Ag		Metals	Silver, metal	7440-22-4		0.00256915	g	35002	3.5002		5790	0.579
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.07074418	g	963817	96.3817		159441	15.9441
Solder Balls - Pb Free, Sn/Ag		Metals	Zinc, metal	7440-66-6		0.00000139	g	19	0.0019		3	0.0003
Silicon Semiconductor Die	0.0142						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000284	g	20000	2		640	0.064
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.013916	g	980000	98		31363	3.1363
Die Encapsulant, Halogen-free	0.2389						g					
Die Encapsulant, Halogen-free		Metals	Other aluminum compounds	-		0.007167	g	30000	3		16152	1.6152
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.002389	g	10000	1		5384	0.5384
Die Encapsulant, Halogen-free		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.007167	g	30000	3		16152	1.6152
Die Encapsulant, Halogen-free		Plastics/polymers	Other phenolic resins	-		0.007167	g	30000	3		16152	1.6152
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		0.203065	g	850000	85		457682	45.7682
Die Encapsulant, Halogen-free		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.011945	g	50000	5		26921	2.6921
Organic Substrate	0.112						g					
Organic Substrate		Solvents, additives, and other materials	Acrylonitrile/Butadiene copolymer, carboxyl terminated (2674)	68891-46-3		0.00017371	g	1551	0.1551		391	0.0391
Organic Substrate		Metals	Barium sulfate	7727-43-7		0.00078534	g	7012	0.7012		1769	0.1769
Organic Substrate		Metals	Copper, metal	7440-50-8		0.03318223	g	296270	29.627		74785	7.4785
Organic Substrate		Plastics/polymers	4,4'-dihydroxy-3,3',5,5'-tetramethylbiphenyl diglycidyl ether	85954-11-6		0.00196112	g	17510	1.751		4419	0.4419
Organic Substrate		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.02775259	g	247791	24.7791		62548	6.2548
Organic Substrate		Metals	Gold, metal	7440-57-5		0.00039581	g	3534	0.3534		892	0.0892
Organic Substrate		Nickel (external applications only)	Nickel	7440-02-0		0.0018275	g	16317	1.6317		4118	0.4118
Organic Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.02348304	g	209670	20.967		52925	5.2925
Organic Substrate		Glass	Silicon dioxide	7631-86-9		0.00038002	g	3393	0.3393		856	0.0856
Organic Substrate		Plastics/polymers	Triazine	25722-66-1		0.00853922	g	76243	7.6243		19245	1.9245
Organic Substrate		Plastics/polymers	Other acrylic resins	-		0.0017453	g	15583	1.5583		3933	0.3933
Organic Substrate		Solvents, additives, and other materials	Talc (containing no asbestos fibers)	14807-96-9		0.00038842	g	3468	0.3468		875	0.0875
Organic Substrate		Solvents, additives, and other materials	Bis(3-ethyl-5-methyl-4-maleimidophenyl)methane	105391-33-1		0.0113857	g	101658	10.1658		25660	2.566
Bonding Wire, PdCu	0.0037						g					
Bonding Wire, PdCu		Metals	Copper, metal	7440-50-8		0.0036297	g	981000	98.1		8180	0.818
Bonding Wire, PdCu		Metals	Gold, metal	7440-57-5		0.0000037	g	1000	0.1		8	0.0008
Bonding Wire, PdCu		Metals	Palladium, metal	7440-05-3		0.0000666	g	18000	1.8		150	0.015

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

IPC1752 XML LINKS

http://www.freescale.com/mcds/MCF52256CVN66_IPC1752_v11.xml

http://www.freescale.com/mcds/MCF52256CVN66_IPC1752A.xml