PART INFORMATION

Mfg Item Number	MSC7121ZQF
Mfg Item Name	PBGA 456 35SQ*1.22P1.27

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2017-12-20
Response Document ID	5212A1.2
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
Contact Phone	1-800-521-6274
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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	No
Pb Free	No
HalogenFree	Yes
Plating Indicator	e0
EU RoHS Exemption(s)	

MANUFACTURING

Mfg Item Number	MSC7121ZQF
Mfg Item Name	PBGA 456 35SQ*1.22P1.27
Version	ALL
Weight	6.640400
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	225 C
Max Time at Peak Temperature	30 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	3 - Item(s) does not contain RoHS restricted substances per the definition above except for lead in solders and selected exemptions, if any
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%
Epoxy Die Attach	0.0063						g					
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.0046421	g	736842	73.6842		699	0.0699
Epoxy Die Attach		Plastics/polymers	Proprietary Material-Di-ester resin	-		0.00066316	g	105263	10.5263		99	0.0099
Epoxy Die Attach		Solvents, additives, and other materials	Proprietary Material-Functionalized Ester	-		0.00066316	g	105263	10.5263		99	0.0099
Epoxy Die Attach		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.00033158	g	52632	5.2632		49	0.0049
Solder Balls - Low Lead	0.8844						g					
Solder Balls - Low Lead		Lead/Lead Compounds	Lead	7439-92-1		0.327228	g	370000	37		49278	4.9278
Solder Balls - Low Lead		Metals	Tin, metal	7440-31-5		0.557172	g	630000	63		83906	8.3906
Heat Sink	1.9045						g					
Heat Sink		Metals	Copper, metal	7440-50-8		1.88924876	g	991992	99.1992		284508	28.4508
Heat Sink		Nickel (external applications only)	Nickel	7440-02-0		0.01525124	g	8008	0.8008		2296	0.2296
Bonding Wire	0.0179						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0179	g	1000000	100		2695	0.2695
Non-Conductive Epoxy/Adhesive	0.0036						g					
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.00162	g	450000	45		243	0.0243
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other organic silicon compounds	-		0.00072	g	200000	20		108	0.0108
Non-Conductive Epoxy/Adhesive		Glass	Silica, vitreous	60676-86-0		0.00072	g	200000	20		108	0.0108
Non-Conductive Epoxy/Adhesive		Glass	Dimethyl silicone polymer with silica	67762-90-7		0.00027	g	75000	7.5		40	0.004
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Dimethyl,methyl hydrogen siloxane	68037-59-2		0.00027	g	75000	7.5		40	0.004
Organic Substrate	2.4682						g					
Organic Substrate		Glass	Silicon dioxide	7631-86-9		2.4682	g	1000000	100		371707	37.1707
Silicon Semiconductor Die	0.0304						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000608	g	20000	2		91	0.0091
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.029792	g	980000	98		4486	0.4486
Die Encapsulant, Halogen-free	1.3251						g					
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00529907	g	3999	0.3999		798	0.0798
Die Encapsulant, Halogen-free		Metals	Proprietary Material-Other magnesium compounds	-		0.1589802	g	119976	11.9976		23941	2.3941
Die Encapsulant, Halogen-free		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.11658495	g	87982	8.7982		17556	1.7556
Die Encapsulant, Halogen-free		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.0264967	g	19996	1.9996		3990	0.399
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-86-0		0.90115413	g	680065	68.0065		135707	13.5707
Die Encapsulant, Halogen-free		Plastics/polymers	Proprietary Material-Other Non-halogenated Epoxy resins	-		0.11658495	g	87982	8.7982		17556	1.7556

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/MSC7121ZQF_IPC1752_v11.xml

http://www.freescale.com/mcds/MSC7121ZQF_IPC1752A.xml