

PART INFORMATION

Mfg Item Number	MPC8541EVTAPF
Mfg Item Name	FCPBGA 783 29SQ*3.7P1.0

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2017-02-27
Response Document ID	5279K10967D021A1.56
Contact Name	Freescale Semiconductor Inc
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DECLARATION

EU RoHS	Yes
Pb Free	No
HalogenFree	Yes
Plating Indicator	e2
EU RoHS Exemption(s)	15

MANUFACTURING

Mfg Item Number	MPC8541EVTAPF
Mfg Item Name	FCPBGA 783 29SQ*3.7P1.0
Version	ALL
Weight	4.170900
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	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemption List Version	2012/51/EU
Exemptions in this part	15:Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages
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%
Underfill	0.0319						g				
Underfill		Solvents, additives, and other materials	Methylhexahydrophthalic anhydride	25550-51-0		0.00481897	g	151065	15.1065	1155	0.1155
Underfill		Plastics/polymers	1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	17557-23-2		0.00177667	g	55695	5.5695	425	0.0425
Underfill		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-48-6		0.00177667	g	55695	5.5695	425	0.0425
Underfill		Plastics/polymers	Elastomer Modified Diglycidyl Ether	68809-14-8		0.00177667	g	55695	5.5695	425	0.0425
Underfill		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.02082372	g	652781	65.2781	4992	0.4992
Underfill		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0009273	g	29069	2.9069	222	0.0222
Bonding Agent	0.0299						g				
Bonding Agent		Metals	Aluminum, metal	7429-90-5		0.025415	g	850000	85	6093	0.6093
Bonding Agent		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.004485	g	150000	15	1075	0.1075
Cap/Cover	1.0827						g				
Cap/Cover		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0.0000328	g	3	0.0003	0	0
Cap/Cover		Metals	Chromium, metal	7440-47-3		0.0000328	g	3	0.0003	0	0
Cap/Cover		Metals	Copper, metal	7440-50-8		1.07315487	g	982113	98.2113	257324	25.7324
Cap/Cover		Lead/Lead Compounds	Lead	7439-92-1		0.0000328	g	3	0.0003	0	0
Cap/Cover		Metals	Magnesium, metal	7439-95-4		0.00150246	g	1375	0.1375	360	0.036
Cap/Cover		Mercury/Mercury Compounds	Mercury	7439-97-6		0.0000328	g	3	0.0003	0	0
Cap/Cover		Nickel (external applications only)	Nickel	7440-02-0		0.01802955	g	16500	1.65	4322	0.4322
Capacitor, 0306	0.0204						g				
Capacitor, 0306		Metals	Copper, metal	7440-50-8		0.0028152	g	138000	13.8	674	0.0674
Capacitor, 0306		Nickel (external applications only)	Nickel	7440-02-0		0.003978	g	195000	19.5	953	0.0953
Capacitor, 0306		Metals	Tin, metal	7440-31-5		0.0002652	g	13000	1.3	63	0.0063
Capacitor, 0306		Metals	Barium titanate	12047-27-7		0.013416	g	654000	65.4	3198	0.3198
Capacitor Solder Paste	0.0052						g				
Capacitor Solder Paste		Metals	Copper, metal	7440-50-8		0.000026	g	5000	0.5	6	0.0006
Capacitor Solder Paste		Lead/Lead Compounds	Lead	7439-92-1		0.0000043	g	83	0.0083	0	0
Capacitor Solder Paste		Metals	Silver, metal	7440-22-4		0.000156	g	30000	3	37	0.0037
Capacitor Solder Paste		Metals	Tin, metal	7440-31-5		0.00501757	g	964917	96.4917	1202	0.1202
Solder Balls - Pb Free, Sn/Ag	0.4003						g				
Solder Balls - Pb Free, Sn/Ag		Metals	Aluminum, metal	7429-90-5		0.00001281	g	32	0.0032	3	0.0003
Solder Balls - Pb Free, Sn/Ag		Antimony/Antimony Compounds	Antimony (metallic)	7440-36-0		0.00005004	g	125	0.0125	11	0.0011
Solder Balls - Pb Free, Sn/Ag		Arsenic/Arsenic Compounds	Arsenic	7440-38-2		0.00003002	g	75	0.0075	7	0.0007
Solder Balls - Pb Free, Sn/Ag		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.00007526	g	188	0.0188	18	0.0018
Solder Balls - Pb Free, Sn/Ag		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0.0000052	g	13	0.0013	1	0.0001
Solder Balls - Pb Free, Sn/Ag		Metals	Copper, metal	7440-50-8		0.00002522	g	63	0.0063	6	0.0006
Solder Balls - Pb Free, Sn/Ag		Metals	Gold, metal	7440-57-5		0.00002522	g	63	0.0063	6	0.0006
Solder Balls - Pb Free, Sn/Ag		Metals	Indium, metal	7440-74-6		0.00002522	g	63	0.0063	6	0.0006
Solder Balls - Pb Free, Sn/Ag		Solvents, additives, and other materials	Sulfur	7704-34-9		0.0000028	g	7	0.0007	0	0
Solder Balls - Pb Free, Sn/Ag		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0		0.00002522	g	63	0.0063	6	0.0006
Solder Balls - Pb Free, Sn/Ag		Metals	Iron, metal	7439-89-6		0.00005004	g	125	0.0125	11	0.0011
Solder Balls - Pb Free, Sn/Ag		Lead/Lead Compounds	Lead	7439-92-1		0.00012529	g	313	0.0313	30	0.003
Solder Balls - Pb Free, Sn/Ag		Nickel (external applications only)	Nickel	7440-02-0		0.00001281	g	32	0.0032	3	0.0003
Solder Balls - Pb Free, Sn/Ag		Metals	Silver, metal	7440-22-4		0.0140113	g	35002	3.5002	3359	0.3359
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.38581594	g	963817	96.3817	92501	9.2501
Solder Balls - Pb Free, Sn/Ag		Metals	Zinc, metal	7440-66-6		0.00000781	g	19	0.0019	1	0.0001
High Pb Bumped Semiconductor D	0.1583				15		g				
High Pb Bumped Semiconductor D		Lead/Lead Compounds	Lead	7439-92-1		0.01490822	g	94177	9.4177	3574	0.3574
High Pb Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.0001306	g	825	0.0825	31	0.0031
High Pb Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.00078453	g	4956	0.4956	188	0.0188
High Pb Bumped Semiconductor D		Metals	Titanium, metal	7440-32-6		0.00000665	g	42	0.0042	1	0.0001
High Pb Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0014247	g	9000	0.9	341	0.0341
High Pb Bumped Semiconductor D		Glass	Silicon, doped	-		0.1410453	g	891000	89.1	33816	3.3816
Substrate	2.4322						g				
Substrate		Arsenic/Arsenic Compounds	Arsenic	7440-38-2		0.00001703	g	7	0.0007	4	0.0004
Substrate		Metals	Barium sulfate	7727-43-7		0.01021524	g	4200	0.42	2449	0.2449
Substrate		Metals	Copper, metal	7440-50-8		0.84044428	g	345549	34.5549	201501	20.1501
Substrate		Plastics/polymers	2,2'-(1-methylethylene)bis(4,1-phenyleneoxyethylene)bisocropane	1675-54-3		0.02245164	g	9231	0.9231	5382	0.5382
Substrate		Plastics/polymers	Other Epoxy resins	-		0.00685026	g	15151	1.5151	8835	0.8835
Substrate		Plastics/polymers	Proprietary Material-Other epoxy resins	-		0.10118682	g	41603	4.1603	24260	2.426
Substrate		Lead/Lead Compounds	Lead	7439-92-1		0.00137663	g	556	0.0556	330	0.033
Substrate		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.03192749	g	13127	1.3127	7654	0.7654
Substrate		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.06186057	g	25434	2.5434	14831	1.4831
Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.73360503	g	301622	30.1622	175886	17.5886
Substrate		Glass	Silicon dioxide	7631-86-9		0.17767707	g	73052	7.3052	42599	4.2599
Substrate		Metals	Silver, metal	7440-22-4		0.00094126	g	387	0.0387	225	0.0225
Substrate		Metals	Tin, metal	7440-31-5		0.03256229	g	13388	1.3388	7807	0.7807
Substrate		Metals	Aluminum Hydroxide	21645-51-2		0.37944995	g	156011	15.6011	90975	9.0975
Substrate		Metals	Copper phthalocyanine	147-14-8		0.00163444	g	672	0.0672	391	0.0391

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/mcdfs/MPC8541EVTAPF_IPC1752_v11.xml

http://www.freescale.com/mcdfs/MPC8541EVTAPF_IPC1752A.xml