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**PART INFORMATION**

Mfg Item Number	MPC8349VVALFB
Mfg Item Name	TBGA 672 35*35*1.5P1.0

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2017-11-06
Response Document ID	5215K11016D009A1.35
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	MPC8349VVALFB
Mfg Item Name	TBGA 672 35*35*1.5P1.0
Version	ALL
Weight	9.256000
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

<b>RoHS</b>	
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%
Die Encapsulant, Filler	0.1944						g				
Die Encapsulant, Filler		Solvents, additives, and other materials	Methylhexahydrophthalic anhydride	25550-51-0		0.03044168	g	156593	15.6593	3288	0.3288
Die Encapsulant, Filler		Antimony/Antimony Compounds	Antimony pentoxide	1314-60-9		0.00075097	g	3863	0.3863	81	0.0081
Die Encapsulant, Filler		Bismuth/Bismuth Compounds	Bismuth	7440-69-3		0.00085244	g	4385	0.4385	92	0.0092
Die Encapsulant, Filler		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27810-48-6		0.03044168	g	156593	15.6593	3288	0.3288
Die Encapsulant, Filler		Glass	Silica, vitreous	60676-86-0		0.13191323	g	678566	67.8566	14251	1.4251
Epoxy Die Attach	0.045						g				
Epoxy Die Attach		Solvents, additives, and other materials	1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]	38668-46-1		0.0003803	g	8451	0.8451	41	0.0041
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00583106	g	129579	12.9579	629	0.0629
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.0003803	g	8451	0.8451	41	0.0041
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.03840834	g	853519	85.3519	4149	0.4149
Dam	0.025						g				
Dam		Solvents, additives, and other materials	Methylhexahydrophthalic anhydride	25550-51-0		0.00159315	g	63726	6.3726	172	0.0172
Dam		Solvents, additives, and other materials	Substituted phthalic anhydride	34090-76-1		0.00159315	g	63726	6.3726	172	0.0172
Dam		Plastics/polymers	2,2'-(1-methylethylenedioxybis(4,1-phenyleneoxy)methylene)bisoxirane	1675-54-3		0.00145453	g	58181	5.8181	157	0.0157
Dam		Plastics/polymers	3,4-Epoxy-cyclohexanecarboxylic acid (3,4-epoxycyclohexylmethyl) ester	2386-87-0		0.00145453	g	58181	5.8181	157	0.0157
Dam		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00010525	g	4210	0.421	11	0.0011
Dam		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.00053925	g	21570	2.157	58	0.0058
Dam		Glass	Cristobalite	14464-46-1		0.00008878	g	3951	0.3951	10	0.001
Dam		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.01816136	g	726455	72.6455	1962	0.1962
Bonding Wire	0.0444						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0444	g	1000000	100	4796	0.4796
Silicon Semiconductor Die	0.03						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0006	g	20000	2	64	0.0064
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.0294	g	980000	98	3176	0.3176
Organic Substrate, Halogen-free	8.175						g				
Organic Substrate, Halogen-free		Metals	Barium sulfate	7727-43-7		0.00119355	g	146	0.0146	128	0.0128
Organic Substrate, Halogen-free		Metals	Chromium, metal	7440-47-3		0.00000818	g	1	0.0001	0	0
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		8.04057845	g	883557	88.3557	868712	86.8712
Organic Substrate, Halogen-free		Metals	Gold, metal	7440-57-5		0.0009156	g	112	0.0112	98	0.0098
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other inorganic compounds.	-		0.00070305	g	86	0.0086	75	0.0075
Organic Substrate, Halogen-free		Metals	Other manganese compounds.	-		0.00086655	g	106	0.0106	93	0.0093
Organic Substrate, Halogen-free		Nickel (external applications only)	Nickel	7440-02-0		0.00329453	g	403	0.0403	355	0.0355
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other organic compounds.	-		0.01378305	g	1686	0.1686	1489	0.1489
Organic Substrate, Halogen-free		Plastics/polymers	Other polymers	-		0.06980633	g	8539	0.8539	7541	0.7541
Organic Substrate, Halogen-free		Glass	Other silica compounds	-		0.0003924	g	48	0.0048	42	0.0042
Organic Substrate, Halogen-free		Metals	Zinc, metal	7440-66-6		0.00001635	g	2	0.0002	1	0.0001
Organic Substrate, Halogen-free		Metals	Zirconium, metal	7440-67-7		0.0008982	g	1064	0.1064	939	0.0939
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.01391385	g	1702	0.1702	1503	0.1503
Organic Substrate, Halogen-free		Metals	Copper Phthalocyanine Green	1328-53-6		0.0004905	g	6	0.0006	5	0.0005
Organic Substrate, Halogen-free		Plastics/polymers	Hexafluoropropene, polymer with tetrafluoroethylene	25087-11-2		0.00058043	g	71	0.0071	62	0.0062
Organic Substrate, Halogen-free		Plastics/polymers	Formaldehyde, polymer with 4,4'-(1-methylethylenedioxy)bisphenol	25085-75-0		0.00380555	g	466	0.0466	411	0.0411
Organic Substrate, Halogen-free		Plastics/polymers	Proprietary Material-Other Non-halogenated Epoxy resins	-		0.01639088	g	2005	0.2005	1770	0.177
Solder Balls - Pb Free, Sn/Ag	0.7422						g				
Solder Balls - Pb Free, Sn/Ag		Metals	Aluminum, metal	7429-90-5		0.00002375	g	32	0.0032	2	0.0002
Solder Balls - Pb Free, Sn/Ag		Antimony/Antimony Compounds	Antimony (metallic)	7440-36-0		0.00000278	g	125	0.0125	10	0.001
Solder Balls - Pb Free, Sn/Ag		Arsenic/Arsenic Compounds	Arsenic	7440-39-2		0.00005667	g	75	0.0075	6	0.0006
Solder Balls - Pb Free, Sn/Ag		Bismuth/Bismuth Compounds	Bismuth	7440-69-3		0.00013953	g	188	0.0188	15	0.0015
Solder Balls - Pb Free, Sn/Ag		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0.00009965	g	13	0.0013	1	0.0001
Solder Balls - Pb Free, Sn/Ag		Metals	Copper, metal	7440-50-8		0.00004676	g	63	0.0063	5	0.0005
Solder Balls - Pb Free, Sn/Ag		Metals	Gold, metal	7440-57-5		0.00004676	g	63	0.0063	5	0.0005
Solder Balls - Pb Free, Sn/Ag		Metals	Indium, metal	7440-74-6		0.00004676	g	63	0.0063	5	0.0005
Solder Balls - Pb Free, Sn/Ag		Sulfur	Sulfur	7704-34-9		0.0000052	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		0.00004676	g	63	0.0063	5	0.0005
Solder Balls - Pb Free, Sn/Ag		Metals	Iron, metal	7439-89-6		0.00008164	g	110	0.011	8	0.0008
Solder Balls - Pb Free, Sn/Ag		Lead/Lead Compounds	Lead	7439-92-1		0.00023231	g	313	0.0313	25	0.0025
Solder Balls - Pb Free, Sn/Ag		Nickel (external applications only)	Nickel	7440-02-0		0.00002375	g	32	0.0032	2	0.0002
Solder Balls - Pb Free, Sn/Ag		Metals	Silver, metal	7440-22-4		0.02597848	g	35002	3.5002	2806	0.2806
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.7153561	g	963832	96.3832	77285	7.7285
Solder Balls - Pb Free, Sn/Ag		Metals	Zinc, metal	7440-66-6		0.0000141	g	19	0.0019	1	0.0001



## 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>
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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>

