

PART INFORMATION	
Mfg Item Number	MPC8245ARZU400D
Mfg Item Name	TBGA 352 35*35*1.7P1.27
SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2017-08-31
Response Document ID	5228K10502D007A1.31
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	No
Pb Free	No
HalogenFree	Yes
Plating Indicator	e0
EU RoHS Exemption(s)	
MANUFACTURING	
Mfg Item Number	MPC8245ARZU400D
Mfg Item Name	TBGA 352 35*35*1.7P1.27
Version	ALL
Weight	9.247000
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	220 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	0.0219						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		0.00018508	g	8451	0.8451		20	0.002
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00263778	g	129579	12.9579		396	0.0306
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.00018508	g	8451	0.8451		20	0.002
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.01869206	g	853519	85.3519		2021	0.2021
Dam	0.015						g					
Dam		Solvents, additives, and other materials	Methylhexahydrophthalic anhydride	25550-51-0		0.00095589	g	63726	6.3726		103	0.0103
Dam		Solvents, additives, and other materials	Substituted phthalic anhydride	34090-76-1		0.00095589	g	63726	6.3726		103	0.0103
Dam		Plastics/polymers	2,2'-(1,1-methylethyldiene)bis[4,1-phenyleneoxyethylene]bisoxirane	1675-54-3		0.00087272	g	58181	5.8181		94	0.0094
Dam		Plastics/polymers	3,4-Epoxy-cyclohexanecarboxylic acid (3,4-epoxycyclohexylmethyl) ester	2386-87-0		0.00087272	g	58181	5.8181		94	0.0094
Dam		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00006315	g	4210	0.421		6	0.0006
Dam		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.00032355	g	21570	2.157		34	0.0034
Dam		Glass	Cristobalite	14464-46-1		0.00005927	g	3951	0.3951		6	0.0006
Dam		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.01089681	g	726455	72.6455		1178	0.1178
Die Encapsulant, Filler	0.327						g					
Die Encapsulant, Filler		Solvents, additives, and other materials	Methylhexahydrophthalic anhydride	25550-51-0		0.04656807	g	142410	14.241		5036	0.5036
Die Encapsulant, Filler		Antimony/Antimony Compounds	Antimony pentoxide	1314-60-9		0.00049671	g	1519	0.1519		53	0.0053
Die Encapsulant, Filler		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.00052778	g	1614	0.1614		57	0.0057
Die Encapsulant, Filler		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27810-48-6		0.04656807	g	142410	14.241		5036	0.5036
Die Encapsulant, Filler		Glass	Silica, vitreous	60676-86-0		0.23283937	g	712047	71.2047		25179	2.5179
Organic Substrate, Halogen-free	8.1393						g					
Organic Substrate, Halogen-free		Metals	Aluminum, metal	7429-90-5		0.0404279	g	4967	0.4967		4372	0.4372
Organic Substrate, Halogen-free		Metals	Barium	7440-39-3		0.00326386	g	401	0.0401		352	0.0352
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		8.08065634	g	992795	99.2795		873884	87.3884
Organic Substrate, Halogen-free		Metals	Gold, metal	7440-57-5		0.00633238	g	778	0.0778		684	0.0684
Organic Substrate, Halogen-free		Nickel (external applications only)	Nickel	7440-02-0		0.0081393	g	1000	0.1		880	0.088
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other organic silicon compounds	-		0.00042324	g	52	0.0052		45	0.0045
Organic Substrate, Halogen-free		Metals	Zinc, metal	7440-66-6		0.00005698	g	7	0.0007		6	0.0006
Bonding Wire	0.0188						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0188	g	1000000	100		2033	0.2033
Solder Balls - Low Lead	0.675						g					
Solder Balls - Low Lead		Metals	Aluminum, metal	7429-90-5		0.00000054	g	8	0.0008		0	0
Solder Balls - Low Lead		Antimony/Antimony Compounds	Antimony (metallic)	7440-36-0		0.00000473	g	7	0.0007		0	0
Solder Balls - Low Lead		Arsenic/Arsenic Compounds	Arsenic	7440-38-2		0.0000135	g	20	0.002		1	0.0001
Solder Balls - Low Lead		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.00000743	g	11	0.0011		0	0
Solder Balls - Low Lead		Metals	Copper, metal	7440-50-8		0.00000675	g	10	0.001		0	0
Solder Balls - Low Lead		Metals	Iron, metal	7439-89-6		0.00001148	g	17	0.0017		1	0.0001
Solder Balls - Low Lead		Lead/Lead Compounds	Lead	7439-92-1		0.24301215	g	360018	36.0018		26280	2.628
Solder Balls - Low Lead		Nickel (external applications only)	Nickel	7440-02-0		0.00002498	g	37	0.0037		2	0.0002
Solder Balls - Low Lead		Metals	Silver, metal	7440-22-4		0.01344465	g	19918	1.9918		1453	0.1453
Solder Balls - Low Lead		Metals	Tin, metal	7440-31-5		0.4184642	g	619947	61.9947		45254	4.5254
Solder Balls - Low Lead		Metals	Zinc, metal	7440-66-6		0.00000473	g	7	0.0007		0	0
Silicon Semiconductor Die	0.05						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.001	g	20000	2		108	0.0108
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.049	g	980000	98		5299	0.5299

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/MPC8245ARZU400D_IPC1752_v11.xml

http://www.freescale.com/mcds/MPC8245ARZU400D_IPC1752A.xml