

PART INFORMATION

Mfg Item Number	G4860NSN7QUMD
Mfg Item Name	FCPBGA 1020 33*33*2 P1

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2016-10-03
Response Document ID	00BSK50008S357A1.18
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	e1
EU RoHS Exemption(s)	

MANUFACTURING

Mfg Item Number	G4860NSN7QUMD
Mfg Item Name	FCPBGA 1020 33*33*2 P1
Version	ALL
Weight	7.097300
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	250 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	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%
Bonding Agent	0.0937						g				
Bonding Agent		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.042165	g	450000	45	5940	0.594
Bonding Agent		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.03748	g	400000	40	5280	0.528
Bonding Agent		Solvents, additives, and other materials	Dimethylsilylated and trimethylsilylated silica	68988-89-6		0.014055	g	150000	15	1980	0.198
Die Encapsulant, Filler	0.0937						g				
Die Encapsulant, Filler		Metals	Aluminum, metal	7429-90-5		0.067464	g	720000	72	9505	0.9505
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.008433	g	80000	9	1188	0.1188
Die Encapsulant, Filler		Metals	Zinc oxide	1314-13-2		0.016866	g	180000	18	2376	0.2376
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.000937	g	10000	1	132	0.0132
Solder Balls - Lead Free	0.8543						g				
Solder Balls - Lead Free		Metals	Copper, metal	7440-50-8		0.00427919	g	5009	0.5009	602	0.602
Solder Balls - Lead Free		Metals	Silver, metal	7440-22-4		0.02567513	g	30054	3.0054	3617	0.3617
Solder Balls - Lead Free		Metals	Tin, metal	7440-31-5		0.82434568	g	964937	96.4937	116149	11.6149
Heat Spreader	4.9541						g				
Heat Spreader		Metals	Copper, metal	7440-50-8		4.89768271	g	988612	98.8612	69095	69.095
Heat Spreader		Nickel (external applications only)	Nickel	7440-02-0		0.05641729	g	11388	1.1388	7949	0.7949
Underfill	0.0461						g				
Underfill		Bismuth/Bismuth Compounds	Bismuth nitrate	10361-44-1		0.002305	g	5000	0.5	32	0.0032
Underfill		Bismuth/Bismuth Compounds	Bismuth trioxide	1304-76-3		0.002305	g	5000	0.5	32	0.0032
Underfill		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-48-6		0.006915	g	150000	15	974	0.0974
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00461	g	100000	10	649	0.0649
Underfill		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.002305	g	5000	0.5	32	0.0032
Underfill		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.01383	g	30000	3	194	0.0194
Underfill		Glass	Silica, vitreous	60676-86-0		0.02766	g	600000	60	3997	0.3997
Underfill		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.002305	g	5000	0.5	32	0.0032
Underfill		Solvents, additives, and other materials	Proprietary Material-Other aliphatic amine compounds	-		0.00461	g	100000	10	649	0.0649
Pb-free Bumped Semiconductor D	0.1549						g				
Pb-free Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.0007745	g	5000	0.5	109	0.0109
Pb-free Bumped Semiconductor D		Metals	Silver, metal	7440-22-4		0.00048794	g	3150	0.315	68	0.068
Pb-free Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.01345307	g	86850	8.685	1895	0.1895
Pb-free Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.013941	g	9000	0.9	196	0.0196
Pb-free Bumped Semiconductor D		Glass	Silicon, doped	-		0.13879039	g	896000	89.6	19555	1.9555
Organic Substrate, Halogen-free	0.9005						g				
Organic Substrate, Halogen-free		Metals	Barium sulfate	7727-43-7		0.1132811	g	125798	12.5798	15961	1.5961
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		0.46946849	g	521342	52.1342	66147	6.6147
Organic Substrate, Halogen-free		Plastics/polymers	4,4'-dihydroxy-3,3',5,5'-tetramethylbiphenyl diglycidyl ether	85954-11-6		0.00311753	g	3462	0.3462	439	0.0439
Organic Substrate, Halogen-free		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.0009956	g	1110	0.111	140	0.014
Organic Substrate, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.03005779	g	33379	3.3379	4235	0.4235
Organic Substrate, Halogen-free		Metals	Talc	14807-96-6		0.02510504	g	27879	2.7879	3537	0.3537
Organic Substrate, Halogen-free		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.01326076	g	14726	1.4726	1868	0.1868
Organic Substrate, Halogen-free		Plastics/polymers	Other polymers	-		0.00469995	g	5508	0.5508	698	0.0698
Organic Substrate, Halogen-free		Glass	Fibrous glass-wool	65997-17-3		0.07514402	g	83447	8.3447	10587	1.0587
Organic Substrate, Halogen-free		Glass	Silicon dioxide	7631-86-9		0.0092652	g	10246	1.0246	1300	0.13
Organic Substrate, Halogen-free		Metals	Silver, metal	7440-22-4		0.00173346	g	1925	0.1925	244	0.0244
Organic Substrate, Halogen-free		Metals	Tin, metal	7440-31-5		0.06525243	g	62468	6.2468	7925	0.7925
Organic Substrate, Halogen-free		Plastics/polymers	Other acrylic/epoxy resin mixture	-		0.01218196	g	13528	1.3528	1716	0.1716
Organic Substrate, Halogen-free		Metals	Aluminum Hydroxide	21645-51-2		0.0611468	g	66757	6.6757	8470	0.847
Organic Substrate, Halogen-free		Metals	Copper phthalocyanine	147-14-8		0.00015038	g	167	0.0167	21	0.0021
Organic Substrate, Halogen-free		Plastics/polymers	2-Octanemethanamine, N-(2-methyl-4-(2-oxiranylmethoxy)phenyl)-N-(2-oxiranylmethyl)-	110856-67-2		0.00149933	g	1665	0.1665	211	0.0211
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Cyclohexanone	108-94-1		0.023947	g	26593	2.6593	3374	0.3374

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/G4860NSN7QUMD_IPC1752_v11.xml

http://www.freescale.com/mcdfs/G4860NSN7QUMD_IPC1752A.xml