

PART INFORMATION		
Mfg Item Number		MC9S12P32MFT
Mfg Item Name		QFN-EP 48 7.0SQ*1.0P0.5
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2016-11-21
Response Document ID		6232K50010S567A1.13
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		Yes
Pb Free		Yes
HalogenFree		Yes
Plating Indicator		e3
EU RoHS Exemption(s)		
MANUFACTURING		
Mfg Item Number		MC9S12P32MFT
Mfg Item Name		QFN-EP 48 7.0SQ*1.0P0.5
Version		ALL
Weight		0.135500
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	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	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%
Lead Frame Plating	0.0029						g					
Lead Frame Plating		Lead/Lead Compounds	Lead	7439-92-1		0.0000058	g	200	0.02		4	0.0004
Lead Frame Plating		Metals	Tin, metal	7440-31-5		0.00289942	g	999800	99.98		21397	2.1397
Die Encapsulant	0.0487						g					
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.00362172	g	74368	7.4368		26728	2.6728
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00014488	g	2975	0.2975		1069	0.1069
Die Encapsulant		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.00123138	g	25285	2.5285		9087	0.9087
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.00265595	g	54537	5.4537		19601	1.9601
Die Encapsulant		Glass	Dimethyl silicone polymer with silica	67762-90-7		0.04104607	g	842835	84.2835		302923	30.2923
Copper Lead Frame	0.0788						g					
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.07595965	g	963955	96.3955		560599	56.0599
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0		0.00006501	g	825	0.0825		479	0.0479
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.0018518	g	23500	2.35		13666	1.3666
Copper Lead Frame		Lead/Lead Compounds	Lead	7439-92-1		0.0000134	g	170	0.017		98	0.0098
Copper Lead Frame		Metals	Silver, metal	7440-22-4		0.000788	g	10000	1		5815	0.5815
Copper Lead Frame		Metals	Tin, metal	7440-31-5		0.00002364	g	300	0.03		174	0.0174
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.0000985	g	1250	0.125		726	0.0726
Epoxy Die Attach	0.0019						g					
Epoxy Die Attach		Solvents, additives, and other materials	Other acrylates	-		0.00013307	g	70035	7.0035		982	0.0982
Epoxy Die Attach		Solvents, additives, and other materials	Proprietary Material-Other acrylates	-		0.00010455	g	55028	5.5028		771	0.0771
Epoxy Die Attach		Solvents, additives, and other materials	Other acrylonitrile compounds	-		0.00002376	g	12506	1.2506		175	0.0175
Epoxy Die Attach		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.00002376	g	12506	1.2506		175	0.0175
Epoxy Die Attach		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.00004752	g	25013	2.5013		350	0.035
Epoxy Die Attach		Plastics/polymers	Other polymers	-		0.00010455	g	55028	5.5028		771	0.0771
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.00146279	g	769884	76.9884		10795	1.0795
Silicon Semiconductor Die	0.0019						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000038	g	20000	2		280	0.028
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.001962	g	980000	98		13741	1.3741
Bonding Wire	0.0013						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0013	g	1000000	100		9594	0.9594

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/MC9S12P32MFT_IPC1752_v11.xml

http://www.freescale.com/mcds/MC9S12P32MFT_IPC1752A.xml