PART INFORMATION	
Mfg Item Number	MMA1211KEG
Mfg Item Name	SENSOR 16SOICW ACCEL

SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2014-10-02
Response Document ID	0226K11282D003A1.8
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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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	No
HalogenFree	No
Plating Indicator	e3
EU RoHS Exemption(s)	7c-I

MANUFACTURING	
Mfg Item Number	MMA1211KEG
Mfg Item Name	SENSOR 16SOICW ACCEL
Version	ALL
Weight	0.609200
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	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	7c-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
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%
Die Overcoat	0.0055						g				
Die Overcoat		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.00051715	g	94028	9.4028	848	0.0848
Die Overcoat		Plastics/polymers	Plastic: SI - Silicone Rubber	-		0.00359104	g	652916	65.2916	5894	0.5894
Die Overcoat		Glass	Silica, vitreous	60676-86-0		0.00139181	g	253056	25.3056	2284	0.2284
Bonding Wire	0.0017						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0017	g	1000000	100	2790	0.279
Bonding Wire	0.0017						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0017	g	1000000	100	2790	0.279
Lead Frame Plating	0.0077						g				
Lead Frame Plating		Lead/Lead Compounds	Lead	7439-92-1		0.00000154	g	200	0.02	2	0.0002
Lead Frame Plating		Metals	Tin, metal	7440-31-5		0.00769846	g	999800	99.98	12636	1.2636
Copper Lead Frame	0.1579						g				
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.15220849	g	963955	96.3955	249849	24.9849
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.00013027	g	825	0.0825	213	0.0213
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.00371065	g	23500	2.35	6091	0.6091
Copper Lead Frame		Lead/Lead Compounds	Lead	7439-92-1		0.00002684	g	170	0.017	44	0.0044
Copper Lead Frame		Metals	Silver, metal	7440-22-4		0.001579	g	10000	1	2591	0.2591
Copper Lead Frame		Metals	Tin, metal	7440-31-5		0.00004737	g	300	0.03	77	0.0077
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.00019738	g	1250	0.125	323	0.0323
Die Encapsulant	0.4113						g				
Die Encapsulant		Antimony/Antimony Compounds	Antimony trioxide	1309-64-4		0.00913991	g	22222	2.2222	15003	1.5003
Die Encapsulant		Flame Retardants	Bromophenol, formaldehyde, epichlorohydrin polymer	68541-56-0		0.00913991	g	22222	2.2222	15003	1.5003
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00456995	g	11111	1.1111	7501	0.7501
Die Encapsulant		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.02285018	g	55556	5.5556	37508	3.7508
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.36560005	g	888889	88.8889	600153	60.0153
Epoxy Die Attach	0.0013						g				
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00020968	g	161290	16.129	344	0.0344
Epoxy Die Attach		Solvents, additives, and other materials	1-cyanoguanidine	461-58-5		0.00001398	g	10753	1.0753	22	0.0022
Epoxy Die Attach		Plastics/polymers	Other phenolic resins	-		0.00002796	g	21505	2.1505	45	0.0045
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.00104838	g	806452	80.6452	1720	0.172
Non-Conductive Epoxy/Adhesive	0.0048						g				
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	68083-18-1		0.000648	g	135000	13.5	1063	0.1063
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.002256	g	470000	47	3703	0.3703
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Other organic Silicon Compounds	-		0.000096	g	20000	2	157	0.0157
Non-Conductive Epoxy/Adhesive		Glass	D4 and HMDZ treated Silicon Dioxide	68937-51-9		0.00108	g	225000	22.5	1772	0.1772
Non-Conductive Epoxy/Adhesive		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.000528	g	110000	11	866	0.0866
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.00008645	g	18010	1.801	141	0.0141
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Dimethyl,methyl hydrogen siloxane	68037-59-2		0.00010555	g	21990	2.199	173	0.0173
Silicon Semiconductor Die	0.0085						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.00017	g	20000	2	279	0.0279
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.00833	g	980000	98	13673	1.3673
Pb Glass Frit Semiconductor Di	0.0088				7c-I		g				
Pb Glass Frit Semiconductor Di		Lead/Lead Compounds	Lead (II) titanate	12060-00-3		0.00009135	g	10381	1.0381	149	0.0149
Pb Glass Frit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.0000875	g	9943	0.9943	143	0.0143
Pb Glass Frit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monoisobutyrate	25265-77-4		0.0000875	g	9943	0.9943	143	0.0143
Pb Glass Frit Semiconductor Di		Glass	Silicon, doped	-		0.00853365	g	969733	96.9733	14007	1.4007

LINKS	
MCD LINK	
Freescale website	http://www.freescale.com
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescale_Response.pdf
China RoHS	http://www.freescale.com/chinarohs
REACH signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescale_Response.pdf
ELV signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescale_Reponse.pdf
Conflict Minerals statement	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescale_Response.pdf
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	http://www.freescale.com/epp
FAQ	http://www.freescale.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ
Technical Service Request	https://www.freescale.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&defaultTopic=Environmentally Preferred Prod
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v1.1 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf

IPC1752 XML LINKS

http://www.freescale.com/mcds/MMA1211KEG_IPC1752_v11.xml

http://www.freescale.com/mcds/MMA1211KEG_IPC1752A.xml