

PART INFORMATION

Mfg Item Number	MPXA4100A6T1
Mfg Item Name	SMALL OUTLINE SMT

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2013-01-08
Response Document ID	0870K50010S210A1.17
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	No
HalogenFree	No
Plating Indicator	e4
EU RoHS Exemption(s)	7c-I

MANUFACTURING

Mfg Item Number	MPXA4100A6T1
Mfg Item Name	SMALL OUTLINE SMT
Version	ALL
Weight	1.014800
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	
Peak Processing Temperature	
Max Time at Peak Temperature	
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
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	<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

SubPart	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%	REACHPPM	REACH%
Cap/Cover	0.1958						g				
Cap/Cover		Metals	Chromium, metal	7440-47-3		0.03286	g	180216	18.0216	34771	3.4771
Cap/Cover		Solvents, additives, and other materials	Sulfur	7704-34-9		0.000059	g	300	0.03	58	0.0058
Cap/Cover		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.000078	g	400	0.04	76	0.0076
Cap/Cover		Solvents, additives, and other materials	Silicon	7440-21-3		0.00147	g	7509	0.7509	1448	0.1448
Cap/Cover		Metals	Iron, metal	7439-89-6		0.166947	g	801563	80.1563	154660	15.466
Cap/Cover		Metals	Manganese, metal	7439-96-5		0.00196	g	10012	1.0012	1931	0.1931
Non-Conductive Epoxy/Adhesive	0.0027						g				
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Silicone gum	67762-94-1		0.000028	g	10324	1.0324	27	0.0027
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	68083-18-1		0.000332	g	122911	12.2911	327	0.0327
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.001062	g	393313	39.3313	1046	0.1046
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.000597	g	221239	22.1239	588	0.0588
Non-Conductive Epoxy/Adhesive		Glass	D4 and HMDZ treated Silicon Dioxide	68937-61-6		0.000398	g	147493	14.7493	392	0.0392
Non-Conductive Epoxy/Adhesive		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.000252	g	93412	9.3412	248	0.0248
Non-Conductive Epoxy/Adhesive		Metals	Titanium (IV) Oxide	13463-67-7		0.000031	g	11308	1.1308	30	0.003
Bonding Wire	0.0011						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0011	g	1000000	100	1083	0.1083
Gel Die Encapsulant	0.0277						g				
Gel Die Encapsulant		Solvents, additives, and other materials	Proprietary Material-Other inorganic fluorine compounds and their aqueous salts	-		0.0277	g	1000000	100	27296	2.7296
Copper Lead Frame	0.7789						g				
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.429635	g	551592	55.1592	423378	42.3378
Copper Lead Frame		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.016492	g	21174	2.1174	16251	1.6251
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.000616	g	791	0.0791	607	0.0607
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.000362	g	465	0.0465	356	0.0356
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.010356	g	13296	1.3296	10204	1.0204
Copper Lead Frame		Metals	Nickel, metal	7440-02-0		0.006483	g	8323	0.8323	6388	0.6388
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.000318	g	408	0.0408	313	0.0313
Copper Lead Frame		Plastics/polymers	Polyphenylene Sulfide (PPS)	26125-40-6		0.099186	g	127341	12.7341	97740	9.774
Copper Lead Frame		Glass	Fibrous-glass-wool	65997-17-3		0.214902	g	275904	27.5904	211769	21.1769
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.00055	g	705	0.0706	541	0.0541
Pb Glass Frit Semiconductor Di	0.0086				7c-I		g				
Pb Glass Frit Semiconductor Di		Metals	Lead titanium oxide (PbTiO3)	12060-00-3		0.000089	g	10381	1.0381	87	0.0087
Pb Glass Frit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.000086	g	9943	0.9943	84	0.0084
Pb Glass Frit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monoisobutyrate	25265-77-4		0.000086	g	9943	0.9943	84	0.0084
Pb Glass Frit Semiconductor Di		Glass	Silicon, doped	-		0.008339	g	969733	96.9733	8217	0.8217

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 v0.9 Form http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf

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/mcdfs/MPXA4100A6T1_IPC1752_v09.xml

http://www.freescale.com/mcdfs/MPXA4100A6T1_IPC1752_v11.xml

http://www.freescale.com/mcdfs/MPXA4100A6T1_IPC1752A.xml