

PART INFORMATION

Mfg Item Number	MCIMX31LCVKN5DR2
Mfg Item Name	TMAP 457 14*14*0.7P0.5

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2018-01-23
Response Document ID	5327K10745D083A1.19
Contact Name	Freescale Semiconductor Inc
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DECLARATION

EU RoHS	Yes
Pb Free	Yes
HalogenFree	Yes
Plating Indicator	e1
EU RoHS Exemption(s)	

MANUFACTURING

Mfg Item Number	MCIMX31LCVKN5DR2
Mfg Item Name	TMAP 457 14*14*0.7P0.5
Version	ALL
Weight	0.424100
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	<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%
Epoxy Die Attach	0.0045						g				
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.0033158	g	736842	73.6842	7818	0.7818
Epoxy Die Attach		Plastics/polymers	Proprietary Material-Di-ester resin	-		0.00047368	g	105263	10.5263	1116	0.1116
Epoxy Die Attach		Solvents, additives, and other materials	Proprietary Material-Functionalized Ester	-		0.00047368	g	105263	10.5263	1116	0.1116
Epoxy Die Attach		Plastics/polymers	Other Non-halogenated Epoxy resins	-		0.00023684	g	52632	5.2632	558	0.0558
Solder Balls - Lead Free	0.0496						g				
Solder Balls - Lead Free		Metals	Copper, metal	7440-50-8		0.000248	g	5000	0.5	584	0.0584
Solder Balls - Lead Free		Metals	Silver, metal	7440-22-4		0.000496	g	10000	1	1169	0.1169
Solder Balls - Lead Free		Metals	Tin, metal	7440-31-5		0.048856	g	885000	88.5	115199	11.5199
Silicon Semiconductor Die	0.0155						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.00031	g	20000	2	730	0.073
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.01519	g	980000	98	35817	3.5817
Organic Substrate, Halogen-free	0.1552						g				
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other aromatic amines	-		0.00010088	g	650	0.065	237	0.0237
Organic Substrate, Halogen-free		Pigments and Dyes	Proprietary Material-Other azo dyes	-		0.00005044	g	325	0.0325	118	0.0118
Organic Substrate, Halogen-free		Metals	Barium sulfate	7727-43-7		0.00163798	g	10554	1.0554	3862	0.3862
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		0.07087146	g	456646	45.6646	167110	16.711
Organic Substrate, Halogen-free		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.01346826	g	86780	8.678	31757	3.1757
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other Ethylene Glycol Monomethyl or Monoethyl Ethers or their Acetates	-		0.00357829	g	23056	2.3056	8437	0.8437
Organic Substrate, Halogen-free		Metals	Gold, metal	7440-57-5		0.00157497	g	10148	1.0148	3713	0.3713
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other inorganic compounds	-		0.0088629	g	57257	5.7257	20953	2.0953
Organic Substrate, Halogen-free		Nickel (external applications only)	Nickel	7440-02-0		0.00422475	g	30443	3.0443	11140	1.114
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other organic compounds	-		0.00032763	g	2111	0.2111	772	0.0772
Organic Substrate, Halogen-free		Glass	Fibrous-glass-wool	65997-17-3		0.00541508	g	34891	3.4891	12768	1.2768
Organic Substrate, Halogen-free		Glass	Other silica compounds	-		0.00468335	g	31336	3.1336	11467	1.1467
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances	-		0.00109802	g	6495	0.6495	2376	0.2376
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Proprietary Material-Other Aromatic carbonyl compounds	-		0.00062996	g	4059	0.4059	1485	0.1485
Organic Substrate, Halogen-free		Plastics/polymers	Triazine	25722-66-1		0.00319355	g	20577	2.0577	7530	0.753
Organic Substrate, Halogen-free		Solvents, additives, and other materials	Other Bismaleimides	-		0.00597054	g	38470	3.847	14078	1.4078
Organic Substrate, Halogen-free		Plastics/polymers	Proprietary Material-Other acrylic resins	-		0.00735803	g	47410	4.741	17349	1.7349
Organic Substrate, Halogen-free		Metals	Aluminum Hydroxide	21645-51-2		0.00930284	g	59941	5.9941	21935	2.1935
Organic Substrate, Halogen-free		Plastics/polymers	Proprietary Material-Other Non-halogenated Epoxy resins	-		0.01223758	g	78851	7.8851	28855	2.8855
Die Encapsulant, Halogen-free	0.1921						g				
Die Encapsulant, Halogen-free		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00060435	g	3146	0.3146	1425	0.1425
Die Encapsulant, Halogen-free		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.00906597	g	47194	4.7194	21376	2.1376
Die Encapsulant, Halogen-free		Glass	Silica, vitreous	60676-96-0		0.17134878	g	891977	89.1977	404046	40.4046
Die Encapsulant, Halogen-free		Plastics/polymers	Proprietary Material-Other Non-halogenated Epoxy resins	-		0.0110809	g	57683	5.7683	26128	2.6128
Bonding Wire, Copper	0.0072						g				
Bonding Wire, Copper		Metals	Copper, metal	7440-50-8		0.006984	g	970000	97	16467	1.6467
Bonding Wire, Copper		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000216	g	30000	3	509	0.0509

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/MCIMX31LCVKN5DR2_IPC1752_v11.xml

http://www.freescale.com/mcdfs/MCIMX31LCVKN5DR2_IPC1752A.xml