

**PART INFORMATION**

Mfg Item Number	MPVZ5004G6U
Mfg Item Name	SMALL OUTLINE SMT

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2016-03-17
Response Document ID	0870K50010S291A1.19
Contact Name	Freescale Semiconductor Inc
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Representative Title	EPP Customer Response
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Representative Email	eppanlst@freescale.com
URL for Additional Information	www.freescale.com

**DECLARATION**

EU RoHS	Yes
Pb Free	Yes
HalogenFree	No
Plating Indicator	
EU RoHS Exemption(s)	

**MANUFACTURING**

Mfg Item Number	MPVZ5004G6U
Mfg Item Name	SMALL OUTLINE SMT
Version	ALL
Weight	1.042500
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	
Peak Processing Temperature	245 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%
Non-Conductive Epoxy/Adhesive	0.0027						g				
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Silicone gum	67762-94-1		0.00002787	g	10324	1.0324	26	0.0026
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	68083-18-1		0.00033186	g	122911	12.2911	318	0.0318
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.00106195	g	303313	30.3313	1018	0.1018
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other silicones and silicones	-		0.00059735	g	221239	22.1239	572	0.0572
Non-Conductive Epoxy/Adhesive		Glass	D4 and HMOZ treated Silicon Dioxide	69097-51-9		0.00039823	g	147493	14.7493	391	0.0391
Non-Conductive Epoxy/Adhesive		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.00025221	g	93412	9.3412	241	0.0241
Non-Conductive Epoxy/Adhesive		Metals	Titanium (IV) Oxide	13463-67-7		0.00030353	g	11308	1.1308	29	0.0029
Copper Lead Frame	0.7789						g				
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.43131822	g	553753	55.3753	413751	41.3751
Copper Lead Frame		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.01641298	g	21072	2.1072	15743	1.5743
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.00061299	g	787	0.0787	588	0.0588
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0		0.00030693	g	463	0.0463	345	0.0345
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.0103064	g	13232	1.3232	3686	0.3686
Copper Lead Frame		Nickel (external applications only)	Nickel	7440-02-0		0.00645163	g	8283	0.8283	6188	0.6188
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.00031623	g	408	0.0408	303	0.0303
Copper Lead Frame		Plastics/polymers	Polyphenylene Sulfide (PPS)	26125-40-6		0.00870766	g	126727	12.6727	94683	9.4683
Copper Lead Frame		Glass	Fibrous-glass-wool	65907-17-3		0.21386647	g	274675	27.4675	205147	20.5147
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.00054679	g	702	0.0702	524	0.0524
Silicon Semiconductor Die	0.0086						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000172	g	20000	2	164	0.0164
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.008428	g	980000	98	8084	0.8084
Gel Die Encapsulant	0.0277						g				
Gel Die Encapsulant		Solvents, additives, and other materials	Fluorosilicone monomer (fluorosilicone rubber)	2374-14-3		0.021606	g	780000	78	20725	2.0725
Gel Die Encapsulant		Plastics/polymers	Oxetane, 2,2,3,3-tetrafluoro-homopolymer, fluorinated	113114-19-5		0.006094	g	220000	22	5845	0.5845
Gel Die Encapsulant	0.0277						g				
Gel Die Encapsulant		Solvents, additives, and other materials	Fluorosilicone monomer (fluorosilicone rubber)	2374-14-3		0.021606	g	780000	78	20725	2.0725
Gel Die Encapsulant		Plastics/polymers	Oxetane, 2,2,3,3-tetrafluoro-homopolymer, fluorinated	113114-19-5		0.006094	g	220000	22	5845	0.5845
Bonding Wire	0.0011						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0011	g	1000000	100	1055	0.1055
Cap/Cover	0.1958						g				
Cap/Cover		Metals	Chromium, metal	7440-47-3		0.0368007	g	184270	18.427	34609	3.4609
Cap/Cover		Metals	Copper, metal	7440-50-8		0.00049028	g	2504	0.2504	470	0.047
Cap/Cover		Solvents, additives, and other materials	Sulfur	7704-34-9		0.00000979	g	50	0.005	9	0.0009
Cap/Cover		Solvents, additives, and other materials	Phosphorus, elemental (not containing red allotrope)	7723-14-0		0.00003427	g	175	0.0175	32	0.0032
Cap/Cover		Solvents, additives, and other materials	Silicon	7440-21-0		0.00089037	g	5007	0.5007	940	0.094
Cap/Cover		Metals	Iron, metal	7439-89-6		0.13918971	g	710877	71.0877	133515	13.3515
Cap/Cover		Metals	Manganese, metal	7439-96-5		0.00225503	g	11517	1.1517	2163	0.2163
Cap/Cover		Nickel (external applications only)	Nickel	7440-02-0		0.01647128	g	84123	8.4123	15799	1.5799
Cap/Cover		Metals	Titanium, metal	7440-32-6		0.000196	g	1001	0.1001	188	0.0188
Cap/Cover		Solvents, additives, and other materials	Carbon	7440-44-0		0.0000932	g	476	0.0476	89	0.0089

## LINKS

MCD LINK	
NXP website	<a href="http://www.nxp.com">http://www.nxp.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf</a>
China RoHS	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY</a>
REACH signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf</a>
ELV signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf</a>
Conflict Minerals statement	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf</a>
NXP ENVIRONMENTAL INFORMATION	
Environmental Compliance website	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX</a>
FAQ	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ</a>
Technical Service Request	<a href="http://www.nxp.com/support/sales-and-support:SUPPORTHOME">http://www.nxp.com/support/sales-and-support:SUPPORTHOME</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v1.1 Form	<a href="http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcdfs/MPVZ5004G6U\\_IPC1752\\_v11.xml](http://www.freescale.com/mcdfs/MPVZ5004G6U_IPC1752_v11.xml)

[http://www.freescale.com/mcdfs/MPVZ5004G6U\\_IPC1752A.xml](http://www.freescale.com/mcdfs/MPVZ5004G6U_IPC1752A.xml)