



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-02-09
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacopello	Representative Title	ADG MD Champion
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
------------------------------	------	----------------------------	----------

Legal Statement

Supplier certifies that it gathered the provided information and 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. 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 omprehensive 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 Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
Z0109NN 5AA4	BHLM*Z1G018S	A	998G	2017-02-09
Amount	UoM	Unit type	ST ECOPACK Grade	
110.00	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	6.5-3.5-1.8	4	gull wing	
Comment	Package: SOT 223 PLANAR and TOPGLASS; MDF valid also for Z0109SN 5AA4			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	FALSE
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7c-1	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

Query : California Prop65 list, dated 27th January 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.01	Die	73
Lead	1.10	Soft solder	10009
Lead-Borate Glass	0.17	Die	1536

QueryList : REACH-12th January 2017				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	BHLM*Z1G0185	110.0000								
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die or Dies (choose)	Other inorganic materials	1.050	mg	supplier	die	Silicon (Si)	7440-21-3		0.826	mg	786870	7518				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.029	mg	27593	264				
				supplier	metallization	Gold (Au)	7440-57-5		0.003	mg	2854	27				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	7612	73				
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.005	mg	4757	45				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1903	18				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	7612	73				
				JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	0.169	mg	160799	1536				
				Leadframe	Copper & its alloys	92.063	mg	supplier	alloy	Copper (Cu)	7440-50-8		91.483	mg	993700	831664
								supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.092	mg	999	836
supplier	metallization	Silver (Ag)	7440-22-4						0.488	mg	5301	4436				
JIG - R	solder	Lead (Pb)	7439-92-1					7a-Lead in high me	1.101	mg	954900	10009				
Soft solder	Solder	1.153	mg	supplier	solder	Silver (Ag)	7440-22-4		0.029	mg	25152	264				
				supplier	solder	Tin (Sn)	7440-31-5		0.023	mg	19948	209				
				supplier	wire	Copper (Cu)	7440-50-8		0.076	mg	1000000	691				
Encapsulation	Other Organic Materials	12.896	mg	supplier	mold compound	Silica, vitreous	60676-86-0		11.206	mg	868952	101873				
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		1.032	mg	80025	9382				
				supplier	mold compound	Phenol Resin	26834-02-6		0.516	mg	40012	4691				
				supplier	mold compound	Bismuth (Bi)	7440-69-9		0.077	mg	5971	700				
Connections coating	Solder	2.762	mg	supplier	mold compound	Carbon black	1333-86-4		0.065	mg	5040	591				
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.762	mg	1000000	25109				