



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 *	2014-09-19
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Giuseppe Vitali Palma	Representative Title	AMS & IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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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 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 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
	IYWY*7221AR6	A	ZS1A	2014-09-19
Amount	UoM	Unit type	ST ECOPACK Grade	
16.623	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SOT	2.9X1.6X1.05	5	gull wing	
Comment	Package: SOT 23-5; MD valid for TS7221AI1LT, TS7221BILT			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-16th June 2014				
Query				Response
The product 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						Mfr Item Name	IYWY*7221AR6					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon Die	Other Inorganic Material	0.662	mg	Supplier	Silicon Die	Silicon (Si)	7440-21-3		0.652	mg	984894	39223
Silicon Die			mg	Supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	3021	120
Silicon Die			mg	Supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	3021	120
Silicon Die			mg	Supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.006	mg	9063	361
Leadframe	Copper and its alloy	7.2	mg	Supplier	Alloy	Copper	7440-50-8		6.936	mg	963333	417253
Leadframe			mg	Supplier	Alloy	Iron	7439-89-6		0.162	mg	22500	9746
Leadframe			mg	Supplier	Alloy	Iron Phosphide(Fe2P)	1310-43-6		0.002	mg	278	120
Leadframe			mg	Supplier	Alloy	Zinc	7440-66-6		0.009	mg	1250	541
Leadframe			mg	Supplier	Alloy	Nickel	7440-02-0		0.083	mg	11528	4993
Leadframe			mg	Supplier	Alloy	Palladium	7440-05-3		0.007	mg	972	421
Leadframe			mg	Supplier	Alloy	Gold	7440-57-5		0.001	mg	139	60
Die Attach	Other Organic Material	0.078	mg	Supplier	Glue	Silver	7440-22-4		0.056	mg	717949	3369
Die Attach			mg	Supplier	Glue	methylene diacrylate	42594-17-2		0.013	mg	166667	782
Die Attach			mg	Supplier	Glue	Dicyclopentenylxyethyl methacrylate	68586-19-6		0.003	mg	38462	180
Die Attach			mg	Supplier	Glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.003	mg	38462	180
Die Attach			mg	Supplier	Glue	Palladium (Pd)	7440-05-3		0.001	mg	12821	60
Die Attach			mg	Supplier	Glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.002	mg	25641	120
Bonding Wire	Other Inorganic Material	0.15	mg	Supplier	Bonding Wire	Au	7440-57-5		0.15	mg	1000000	9024
Encapsulation	Other Organic Material	8.533	mg	Supplier	Molding Compound	Epoxy Resin	Proprietary		0.238	mg	27892	14318
Encapsulation			mg	Supplier	Molding Compound	Biphenyl epoxy resin	85954-11-6		0.129	mg	15118	7760
Encapsulation			mg	Supplier	Molding Compound	Phenol resin	Proprietary		0.357	mg	41838	21476
Encapsulation			mg	Supplier	Molding Compound	Silica	60676-86-0		6.921	mg	811086	416351
Encapsulation			mg	Supplier	Molding Compound	Carbon Black	1333-86-4		0.016	mg	1875	963
Encapsulation			mg	Supplier	Molding Compound	Zinc hydroxide	20427-58-1		0.159	mg	18634	9565
Encapsulation			mg	Supplier	Molding Compound	Magnesium hydroxide	1309-42-8		0.713	mg	83558	42892