



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 *	2014-09-26
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 *	Giovanni Giacopello	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
	RVWX*3431AR6	A	ZS1A	2014-09-26
Amount	UoM	Unit type	ST ECOPACK Grade	
10.00	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	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.8X1.5X0.9	3	gull wing	
Comment	Package:SOT 23 3 LDS; MDF valid for TS3431A1LT; TS3431B1LT; TS3431C1LT; TS3431I1LT			

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	RVWX*3431AR6					
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 materials	0.742	mg	supplier	die	Silicon (Si)	7440-21-3		0.714	mg	962264	71400
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	9434	700
Silicon die				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1348	100
Silicon die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	2695	200
Silicon die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.012	mg	16173	1200
Silicon die				supplier	passivation	Gamma-butyrolactone	96-48-0		0.004	mg	5391	400
Silicon die				supplier	passivation	Polyhydroxyamide	55295-98-2		0.002	mg	2695	200
Leadframe	Copper & its alloys	2.273	mg	supplier	alloy	Copper (Cu)	7440-50-8		2.217	mg	975363	221700
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.052	mg	22877	5200
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.001	mg	440	100
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		0.003	mg	1320	300
Die attach	Other inorganic materials	0.031	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		0.021	mg	677419	2100
Die attach				supplier	glue or tape	methylene diacrylate	42594-17-2		0.008	mg	258065	800
Die attach				supplier	glue or tape	Dicyclopentenloxyethyl methacrylate	68586-19-6		0.001	mg	32258	100
Die attach				supplier	glue or tape	Polymer of Polybutadiene + Anhydride	Proprietary		0.001	mg	32258	100
Bonding wire	Other inorganic materials	0.029	mg	supplier	wire	Copper (Cu)	7440-50-8		0.029	mg	1000000	2900
Encapsulation	Other inorganic materials	6.729	mg	supplier	mold compound	Silica, vitreous	60676-86-0		5.738	mg	852727	573800
Encapsulation				supplier	mold compound	phenolic resin	Proprietary		0.236	mg	35072	23600
Encapsulation				supplier	mold compound	epoxy resin	Proprietary		0.269	mg	39976	26900
Encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.135	mg	20062	13500
Encapsulation				supplier	mold compound	carbon black	1333-86-4		0.014	mg	2081	1400
Encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.068	mg	10106	6800
Encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.269	mg	39976	26900
connections coating	Solder	0.196	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.196	mg	1000000	19600