



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2016-11-18
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana San Biagio	Representative Title	AMG 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 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
	DZWY*56VA8TS	A	ZS1A	2016-11-18
Amount	UoM	Unit type	ST ECOPACK Grade	
16.38	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

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	
tin is used or other bulk terminati	Nicke/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.9-1.6-1.05	5	gull wing	
Comment	Package: WY SOT 23 - 5; MDF valid for STM6823TJWY6F			

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	true
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)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-20th June 2016				
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						Mfr Item Name	DZWH*56VA8T5					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	0.741	mg	supplier	die	Silicon (Si)	7440-21-3		0.550	mg	742240	33578
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	2699	122
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1350	61
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	2699	122
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	8097	366
				supplier	polymer die coating	PIX1 Polyimide	108-65-6		0.180	mg	242915	10989
Leadframe	Copper & its alloys	7.672	mg	supplier	Alloy	Copper (Cu)	7440-50-8		7.436	mg	969239	453968
				supplier	Alloy	Iron (Fe)	7439-89-6		0.175	mg	22810	10684
				supplier	Alloy	Phosphorus (P)	12185-10-3		0.002	mg	261	122
				supplier	Alloy	Zinc (Zn)	7440-66-6		0.009	mg	1173	549
	Nickel (Ni)			supplier	metallization	Nickel (Ni)	7440-02-0		0.046	mg	5996	2808
				supplier	metallization	Palladium (Pd)	7440-05-3		0.003	mg	391	183
	Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	130	61
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	130	61
Die attach	Other Organic Materials	0.081	mg	supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.023	mg	283951	1404
				supplier	glue	Aromatic amine	Proprietary		0.003	mg	37037	183
				supplier	glue	Glycol ether ester	Proprietary		0.003	mg	37037	183
				supplier	glue	silica	60676-86-0		0.025	mg	308642	1526
				supplier	glue	Aluminium oxide	1344-28-1		0.027	mg	333333	1648
Bonding wires	Precious metals	0.094	mg	supplier	wire	Gold(Au)	7440-50-8		0.094	mg	1000000	5739
Encapsulation	Other Organic Materials	7.792	mg	supplier	mold compound	Silica, vitreous	60676-86-0		6.646	mg	852926	405739
				supplier	mold compound	phenolic resin	Proprietary		0.273	mg	35036	16667
				supplier	mold compound	epoxy resin	Proprietary		0.311	mg	39913	18987
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.157	mg	20149	9585
				supplier	mold compound	carbon black	1333-86-4		0.016	mg	2053	977
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.078	mg	10010	4762
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.311	mg	39913	18987