



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 *	2015-07-16
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacobello	Representative Title	IPD 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
	HVWV*KR03FC1	A	ZS1A	2015-07-16
Amount	UoM	Unit type	ST ECOPACK Grade	
16.00	mg	Each	ECOPACK® 2	

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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.8 - 1.5 - 0.9	5	gull wing	
Comment	Package: SOT 23 5L; MDF valid for LD2981ABM30TR; LD2981CM30TR			

QueryList : ROHS directive 2011/65/EU _ July 2011	
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-15th June 2015				
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	HVWV*KR03FC1					
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	0.947	mg	supplier	die	Silicon (Si)	7440-21-3		0.920	mg	971846	58250
				supplier	metallization	Aluminum (Al)	7429-90-5		0.015	mg	15641	938
				supplier	Passivation	Silicon Nitride	12033-89-5		0.004	mg	4171	250
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	8342	500
Leadframe	Copper & its alloys	6.949	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.609	mg	963304	418375
				supplier	alloy	Zinc (Zn)	7439-89-6		0.154	mg	22449	9750
				supplier	alloy	Iron (Fe)	12185-10-3		0.002	mg	288	125
				supplier	alloy	Phosphorus (P)	12185-10-3		0.009	mg	1295	563
				supplier	metallization	Silver (Ag)	7440-02-0		0.079	mg	11512	5000
				supplier	metallization	Nickel (Ni)	7440-02-0		0.007	mg	1007	438
Die attach	Other Organic Materials	0.065	mg	supplier	metallization	Palladium (Pd)	7440-05-3		0.001	mg	144	63
				supplier	glue	Gold (Au)	7440-57-5		0.044	mg	692308	2813
				supplier	glue	methylene diacrylate	42594-17-2		0.016	mg	246154	1000
				supplier	glue	Dicyclopentenyl oxethyl methacrylate	29690-82-2		0.002	mg	30769	125
Bonding wire	Other Organic Materials	0.145	mg	supplier	glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.002	mg	30769	125
				supplier	wire	Gold (Au)	7440-57-5		0.143	mg	1000000	9063
Encapsulation	Other Organic Materials	8.512	mg	supplier	molding compound	Silica, vitreous	60676-86-0		7.169	mg	897861	453813
				supplier	molding compound	phenolic resin	Proprietary		0.294	mg	36849	18625
				supplier	molding compound	epoxy resin	Proprietary		0.337	mg	42166	21313
				supplier	molding compound	Biphenyl epoxy resin	85954-11-6		0.168	mg	21021	10625
				supplier	molding compound	carbon black	1333-86-4		0.017	mg	2102	1063