



## Materials Declaration Form

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


Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-06-05
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana San Biagio	<b>Representative Title</b>	AMG MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

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Legal Statement			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
<b>Legal Statement</b>	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	RFL*KSAD1A6	A	Z8GA	2017-06-05
Amount	UoM	Unit type	ST ECOPACK Grade	
123.70	mg	Each	ECOPACK® 2	
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant ( in each organic material)		

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	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	6.5x3.5x1.8	6	gull wing	
Comment	Package: LL SOT 223; MDF valid for LD1117STR			

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
Exemption Id.	Description

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	RFL*KSAD1A6					
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	2.450	mg	supplier	die	Silicon (Si)	7440-21-3		2.372	mg	968163	19175
				supplier	metallization	Aluminium (Al)	7429-90-5		0.030	mg	12245	243
				supplier	Passivation	Silicon Nitride	12033-89-5		0.010	mg	4082	81
				supplier	Passivation	Silicon Oxide	7631-86-9		0.014	mg	5714	113
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	816	16
				supplier	back side metallization	Gold (Au)	7440-57-5		0.005	mg	2041	40
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	6939	137
				Leadframe	Copper & its alloys	58.693	mg	supplier	alloy	Copper (Cu)	7440-50-8	
				supplier	alloy	Iron (Fe)	7439-89-6		0.058	mg	988	469
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.017	mg	290	137
				supplier	alloy	Silver (Ag)	7440-22-4		0.715	mg	12182	5780
Die attach	Other Organic Materials	0.524	mg	supplier	glue	Silver(Ag)	7440-22-4		0.362	mg	690840	2926
				supplier	glue	Acrylate resin	Proprietary		0.108	mg	206107	873
				supplier	glue	Heterocyclic organic compound	Proprietary		0.038	mg	72519	307
				supplier	glue	Treated silica	112-07-2		0.016	mg	30534	129
Bonding wires	Other inorganic materials	0.138	mg	supplier	wire	Copper (Cu)	7440-50-8		0.138	mg	1000000	1116
Encapsulation	Other Organic Materials	61.101	mg	Supplier	mold compound	phenolic resin	29690-82-2		1.792	mg	29328	14487
				Supplier	mold compound	epoxy resin	9003-35-4		1.792	mg	29328	14487
				Supplier	mold compound	Biphenyl epoxy resin	85954-11-6		3.089	mg	50556	24972
				Supplier	mold compound	Carbon Black	1333-86-4		0.062	mg	1015	501
				Supplier	mold compound	Silica	60676-86-0		54.366	mg	889773	439499
connections coating	Solder	0.795	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.795	mg	1000000	6427