



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 *	2018-03-02
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		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	ADG 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

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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
SMA4F31A	8HC5*TFU036C	A	64BA	2018-03-02
	Amount	UoM	Unit type	ST ECOPACK Grade
	39	mg	Each	ECOPACK2

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	
NA	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
CHP	4.14-2.76-1.94	2	Flat	
Comment	SMA Flat 2 Leads No exposed pad			

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	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 15th December 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.33	Die - Leadframe	8462
Lead	1.03	Soft solder	26410

QueryList : REACH-15th January 2018				
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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	8HCS*TFU036C				6000000.0	1000000.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	0.909	mg	supplier	die	Silicon (Si)	7440-21-3		0.874	mg	961495	22410
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	6601	154
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	5501	128
				supplier	metallization	Nickel (Ni)	7440-02-0		0.005	mg	5501	128
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	6601	154
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	4400	103
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	2200	51
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	7701	179
Leadframe	M-004 Copper and its alloys	13.136	mg	supplier	alloy	Copper (Cu)	7440-50-8		12.799	mg	974345	328179
				supplier	alloy	Iron (Fe)	7439-89-6		0.013	mg	990	333
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.004	mg	305	103
				supplier	metallization	Nickel (Ni)	7440-02-0		0.318	mg	24208	8154
				supplier	metallization	Phosphorus (P)	7723-14-0		0.002	mg	152	51
				supplier	metallization	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.030	mg	924596	26410
Soft solder	Solder	1.114	mg	JIG - R	solder	Tin (Sn)	7440-31-5		0.028	mg	25135	718
				supplier	solder	Silver (Ag)	7440-22-4		0.056	mg	50269	1436
				supplier	mold compound	Amorphous Silica	7631-86-9		18.719	mg	885017	479974
				supplier	mold compound	Epoxy resin	29690-82-2		1.269	mg	59997	32538
Encapsulation	M-011 Other inorganic materials	21.151	mg	supplier	mold compound	Phenol resin	9003-35-4		0.952	mg	45010	24410
				supplier	mold compound	Carbon black	1333-86-4		0.085	mg	4018	2181
				supplier	mold compound	Magnesium oxide	1309-48-4		0.042	mg	1986	1077
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.042	mg	1986	1077
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		0.042	mg	1986	1077
				supplier	solder alloy	Tin (Sn)	7440-31-5		0.020	mg	1000000	513
connections coating	Solder	0.020	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.020	mg	1000000	513
Clip	M-011 Other inorganic materials	2.670	mg	supplier	alloy	Copper (Cu)	7440-50-8		2.667	mg	998876	68385
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.002	mg	749	51
				supplier	metallization	Silver (Ag)	7440-22-4		0.001	mg	375	26