Materials Declaration Form

IPC Form Type *	**1752** Distribute	**Version**	**2**
Sections *	Material Info Manufacturing Info	**Subsections ***	A-D *** : Required Field***

Supplier Information			
Company Name *	**STMicroelectronics**	**Response Date ***	**2020-07-06**
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 omprehensive 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.

Signature Not Verified

Digitally signed by giovanni giacopello
Date: 2020.07.06 09:52:56 +02:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
SMA4F58A	8HC5*TFU068C	A	64BA	2020-07-06
	Amount	**UoM**	**Unit type**	**ST ECOPACK Grade**
	39	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**		
1	260	3		
Bulk Solder Termination	**Terminal Plating**	**Terminal Base Alloy**	**Comment**	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00461964	

Package Designator	**Size**	**Nbr of instances**	**Shape**	
CHP	4.20,2.80,0.98	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-March 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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	**Response**
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	**TRUE**

Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 3rd January 2020			
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	0.01	die	308
Lead	0.56	soft solder	14385

QueryList : REACH-16th January 2020				
Query				**Response**
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				**FALSE**
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	0.56	Soft solder	14385
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				**FALSE**
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	0.561	Soft solder	921182

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						**Mfr Item Name**	**8HC5*TFU068C**					
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	0.928	mg	supplier	die	Silicon(Si)	7440-21-3		0.874	mg	941810	22410
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.010	mg	10776	256
				supplier	metallisation	Gold(Au)	7440-57-5		0.007	mg	7543	179
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.012	mg	12931	308
				supplier	passivation	Silicon oxide	7631-86-9		0.006	mg	6466	154
				supplier	polymer coating	Durimide	proprietary		0.019	mg	20474	487
Leadframe	M-004 Copper and its alloys	15.130	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		15.110	mg	998678	387436
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.007	mg	463	179
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.013	mg	859	333
Soft solder	Solder	0.609	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	0.561	mg	921182	14385
				supplier	solder	Tin(Sn)	7440-31-5		0.030	mg	49261	769
				supplier	solder	Silver(Ag)	7440-22-4		0.015	mg	24631	385
				supplier	solder	dry flux residue	proprietary		0.003	mg	4926	77
Encapsulation	M-011 Other inorganic materials	19.510	mg	supplier	mold compound	Amorphous silica	7631-86-9		17.266	mg	884981	442718
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		1.171	mg	60021	30026
				supplier	mold compound	Phenolic resin	9003-35-4		0.878	mg	45003	22513
				supplier	mold compound	Carbon black	1333-86-4		0.078	mg	3998	2000
				supplier	mold compound	Magnesium oxide	1309-48-4		0.039	mg	1999	1000
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.039	mg	1999	1000
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		0.039	mg	1999	1000
connections coating	Solder	0.153	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.153	mg	1000000	3923
Clip		2.670	mg	supplier	alloy	Copper(Cu)	7440-50-8		2.669	mg	999625	68436
				supplier	alloy	Copper Posphorous	12517-41-8		0.001	mg	375	26