



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 *	2019-06-24
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
SMA6F154AY	AHC5*YFU181G	A	64BA	2019-06-24
	Amount	UoM	Unit type	ST ECOPACK Grade
	39.00	mg	Each	ECOPACK2
	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	
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-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 8th March 2019			
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	0.02	Die	485
Lead	1.61	Soft solder	41231

QueryList : REACH-15th January 2019				
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	1.608	Soft solder	41231
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	1.608	Soft solder	924669

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	AHC5*YFU181G					
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	1.520	mg	supplier	die	Silicon (Si)	7440-21-3		1.432	mg	942105	36718
				supplier	metallization	Aluminium (Al)	7429-90-5		0.017	mg	11382	444
				supplier	metallization	Gold (Au)	7440-57-5		0.010	mg	6447	251
				supplier	metallization	Nickel (Ni)	7440-02-0		0.019	mg	12434	485
				supplier	Passivation	Silicon Oxide	7631-86-9		0.010	mg	6579	256
				supplier	polymer die coating	Durimide	Proprietary		0.032	mg	21053	821
Leadframe	M-004 Copper and its alloys	12.816	mg	supplier	alloy	Copper (Cu)	7440-50-8		12.799	mg	998674	328179
				supplier	alloy	Iron (Fe)	7439-89-6		0.006	mg	468	154
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.011	mg	858	282
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	1.608	mg	924669	41231
Soft solder	Solder	1.739	mg	JIG - R	solder	Tin (Sn)	7440-31-5		0.087	mg	50029	2230
				supplier	solder	Silver (Ag)	7440-22-4		0.044	mg	25302	1128
				supplier	mold compound	Amorphous Silica	7631-86-9		17.373	mg	885023	445462
				supplier	mold compound	Epoxy resin	29690-82-2		1.178	mg	60010	30205
				supplier	mold compound	Phenol resin	9003-35-4		0.883	mg	44982	22641
				supplier	mold compound	Carbon black	1333-86-4		0.079	mg	4024	2026
Encapsulation	M-011 Other inorganic materials	19.630	mg	supplier	mold compound	Magnesium oxide	1309-48-4		0.039	mg	1987	1000
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.039	mg	1987	1000
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		0.039	mg	1987	1000
				supplier	solder alloy	Tin (Sn)	7440-31-5		0.020	mg	1000000	513
				supplier	alloy	Copper (Cu)	7440-50-8		3.272	mg	999084	83897
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.002	mg	611	51
Connections coating	Solder	0.020	mg	supplier	metallization	Silver (Ag)	7440-22-4		0.001	mg	305	26
				supplier	metallization	Silver (Ag)	7440-22-4		0.001	mg	305	26
Clip	M-004 Copper and its alloys	3.275	mg	supplier	alloy	Copper (Cu)	7440-50-8		3.272	mg	999084	83897
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.002	mg	611	51
				supplier	metallization	Silver (Ag)	7440-22-4		0.001	mg	305	26