



## 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>	2017-09-20
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG 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>		

**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			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
SMAJ18A-TR	8YST*TWU022C	A	Z54A	2017-09-20
Amount		UoM	Unit type	ST ECOPACK Grade
70.00		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	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOJ	4.14, 2.76, 1.94	2	J bend	
Comment	Package: SMA			

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
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	false
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

Query : California Prop65 list, dated 27th January 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	0.45	Die-Leadframe	6414
Lead	1.04	Soft solder	14900

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						Mfr Item Name	8YST*TWU022C					
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	2.300	mg	supplier	die	Silicon (Si)	7440-21-3		2.184	mg	949565	31200
				supplier	metallization	Aluminium (Al)	7429-90-5		0.084	mg	36522	1200
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	435	14
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	870	29
				supplier	metallization	Nickel (Ni)	7440-02-0		0.005	mg	2174	71
				supplier	Passivation	Silicon Oxide	7631-86-9		0.012	mg	5217	171
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	1739	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	435	14
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	3043	100
				Leadframe	Copper & its alloys	29.732	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						0.030	mg	993	429
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.009	mg	298	129
supplier	metallization	Nickel (Ni)	7440-02-0						0.437	mg	14701	6243
supplier	metallization	Phosphorus (P)	12185-10-3						0.003	mg	100	42
Soft solder	Solder	1.116	mg					JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me
				supplier	solder	Tin (Sn)	7440-31-5		0.056	mg	50309	800
				supplier	solder	Silver (Ag)	7440-22-4		0.017	mg	15004	243
				Encapsulation	Other Organic Materials	24.841	mg	supplier	mold compound	Silica, vitreous	14808-60-7	
supplier	mold compound	Epoxy Cresol Novolak	29690-82-2						2.733	mg	110010	39043
supplier	mold compound	Phenol resin	9003-35-4						3.229	mg	129983	46129
supplier	mold compound	inorganic flame retardant	21645-51-2						0.249	mg	10026	3557
supplier	mold compound	Carbon black	1333-86-4						0.199	mg	8006	2843
Connections coating	Solder	0.728	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.728	mg	1000000	10400
Clip	Copper & its alloys	11.283	mg	supplier	alloy	Copper (Cu)	7440-50-8		11.283	mg	1000000	161186