



## 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>	2016-11-29
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giacopello	<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
<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
SMAJ48CA-TR	8YST*TWB056C	A	Z54A	2016-11-29
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)

QueryList : REACH-20th June 2016				
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*TWB056C					
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	1.231	mg	supplier	die	Silicon (Si)	7440-21-3		1.092	mg	887084	15600
				supplier	metallization	Aluminium (Al)	7429-90-5		0.117	mg	95045	1671
				supplier	Passivation	Silicon Oxide	7631-86-9		0.010	mg	8124	143
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	3249	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	812	14
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	5686	100
Leadframe	Copper & its alloys	30.201	mg	supplier	alloy	Copper (Cu)	7440-50-8		29.715	mg	983908	424500
				supplier	alloy	Iron (Fe)	7439-89-6		0.030	mg	994	429
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.009	mg	298	129
				supplier	metallization	Nickel (Ni)	7440-02-0		0.444	mg	14701	6343
				supplier	metallization	Phosphorus (P)	12185-10-3		0.003	mg	99	43
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.009	mg	298	129
Soft solder	Solder	1.133	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.059	mg	934687	15129
				supplier	solder	Tin (Sn)	7440-31-5		0.057	mg	50309	814
				supplier	solder	Silver (Ag)	7440-22-4		0.017	mg	15004	243
Encapsulation	Other Organic Materials	25.234	mg	supplier	mold compound	Silica, vitreous	14808-60-7		18.723	mg	741975	267471
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		2.776	mg	110010	39657
				supplier	mold compound	Phenol resin	9003-35-4		3.280	mg	129983	46857
				supplier	mold compound	Inorganic flame retardant	21645-51-2		0.253	mg	10027	3614
				supplier	mold compound	Carbon black	1333-86-4		0.202	mg	8005	2886
Connections coating	Solder	0.740	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.740	mg	1000000	10571
Clip	Copper & its alloys	11.461	mg	supplier	alloy	Copper (Cu)	7440-50-8		11.461	mg	1000000	163729