



## 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>	2018-01-30
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	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**

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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
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**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
BTA08-600BWRG	7BVT*086VBL1	A	SH1A	2018-01-30
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900.00	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10,15,5,4,5	3	Through-hole	
Comment	Package: TO 220 I CLIP			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	<b>true</b>
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
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)
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices

QueryList : REACH-15th January 2018				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				<b>true</b>
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	7BVT*086VBL1									
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	8.224	mg	supplier	die	Silicon (Si)	7440-21-3		5.033	mg	611989	2649				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.101	mg	12281	52				
				supplier	metallization	Gold (Au)	7440-57-5		0.019	mg	2310	10				
				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.003	mg	365	2				
				supplier	passivation	Lead (Pb)	7439-92-1	7a-Lead in high me	1.822	mg	221547	959				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.006	mg	729	3				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.137	mg	16659	72				
				supplier	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	1.103	mg	134120	581				
				Leadframe + Slug	Copper & its alloys	1610.306	mg	supplier	alloy	Copper (Cu)	7440-50-8		1604.913	mg	996651	844691
								supplier	alloy	Iron (Fe)	7439-89-6		0.739	mg	459	389
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						1.35	mg	838	711				
supplier	metallization	Nickel (Ni)	7440-02-0						3.304	mg	2052	1739				
Soft solder	Solder	2.975	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.752	mg	925042	1448				
				supplier	solder	Silver (Ag)	7440-22-4		0.149	mg	50084	78				
				supplier	solder	Tin (Sn)	7440-31-5		0.074	mg	24874	39				
Soft solder -2	Solder	2.798	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.378	mg	849893	1252				
				supplier	solder	Antimony (Sb)	7440-36-0		0.28	mg	100071	147				
				supplier	solder	Tin (Sn)	7440-31-5		0.14	mg	50036	74				
Clip	Other inorganic materials	31.625	mg	supplier	Clip	Copper (Cu)	7440-50-8		31.625	mg	1000000	16645				
Encapsulation	Other inorganic materials	148.558	mg	supplier	mold compound	Silica, vitreous	60676-86-0		120.332	mg	810000	63333				
				supplier	mold compound	Phenol resin	9003-35-4		8.914	mg	60004	4692				
				supplier	mold compound	Carbon black	1333-86-4		1.189	mg	8003	626				
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		15.152	mg	101994	7975				
				supplier	mold compound	Metal hydroxide	21645-51-2		2.971	mg	19999	1564				
Connections coating	Solder	6.314	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323				
Subelement	Ceramics / Glass	89.2	mg	supplier	Ceramic isolator	Nickel (Ni)	7440-02-0		1.07	mg	11996	562				
				supplier	Ceramic isolator	Phosphorus (P)	12185-10-3		0.08	mg	897	42				
				supplier	Ceramic isolator	Manganese (Mn)	7439-96-5		3.479	mg	39002	1831				
				supplier	Ceramic isolator	Titanium (Ti)	7440-32-6		0.366	mg	4103	193				
				supplier	Ceramic isolator	Molybdenum oxide	1313-27-5		4.46	mg	50000	2347				
				supplier	Ceramic isolator	Aluminium Oxide (Al2O3)	1344-28-1		79.745	mg	894002	41971				
				supplier	Ceramic isolator											