



## 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  * : Required Field

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-01-24
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS 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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<b>Legal Statement</b>			
<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
	K8V2*L693EA6	A	BO2A	2018-01-24
Amount	UoM	Unit type	ST ECOPACK Grade	
5592.00	mg	Each	ECOPACK® 1	
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

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	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SVP	20x10.7x4.5	15	Through-hole	
Comment	Package: V2 MULTIWATT 15L SPLIT VERT.; MDF valid for L298N			

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
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-15th January 2018				
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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	KBV2*L693EA6					
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	6.802	mg	supplier	die	Silicon (Si)	7440-21-3		6.591	mg	968980	1179
				supplier	metallization	Aluminium (Al)	7429-90-5		0.082	mg	12055	15
				supplier	Passivation	Silicon Nitride	12033-89-5		0.028	mg	4116	5
				supplier	Passivation	Silicon Oxide	7631-86-9		0.038	mg	5587	7
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.005	mg	735	1
Precious metals	Nickel (Ni)			supplier	back side metallization	Gold (Au)	7440-57-5		0.013	mg	1911	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.045	mg	6616	8
Leadframe	Copper & its alloys	4799.846	mg	supplier	alloy	Copper (Cu)	7440-50-8		4789.258	mg	997794	856448
				supplier	alloy	Iron (Fe)	7439-89-6		2.206	mg	460	394
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		4.028	mg	839	720
Soft solder	Other inorganic materials	6.380	mg	supplier	metallization	Silver (Ag)	7440-22-4		4.354	mg	907	779
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.220	mg	974922	1112
				supplier	solder	Silver (Ag)	7440-22-4		0.096	mg	15047	17
				supplier	solder	Tin (Sn)	7440-31-5		0.064	mg	10031	11
Bonding wires	Other inorganic materials	0.761	mg	supplier	wire	Copper (Cu)	7440-50-8		0.812	mg	1000000	145
Encapsulation	Other Organic Materials	747.116	mg	supplier	mold compound	Silica, vitreous	60676-86-0		535.683	mg	717001	95795
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		127.010	mg	170000	22713
				supplier	mold compound	Phenol resin	9003-35-4		53.792	mg	72000	9619
				supplier	mold compound	Brominated epoxy resin	40039-93-8		11.207	mg	15000	2004
				supplier	mold compound	Antimony Trioxide	1309-64-4		14.942	mg	20000	2672
				supplier	mold compound	Bismuth	7440-69-9		2.241	mg	3000	401
connections coating	Solder	31.044	mg	supplier	mold compound	Carbon black	1333-86-4		2.241	mg	3000	401
				supplier	solder alloy	Tin (Sn)	7440-31-5		31.044	mg	1000000	5552