



## Materials Declaration Form

<b>IPC</b>	<b>1752</b>	<b>Version</b>	<b>2</b>
<b>Form Type *</b>	<b>Distribute</b>		
<b>Sectionals *</b>	<b>Material Info</b> <b>Manufacturing Info</b>	<b>Subsectionals *</b>	<b>A-D</b>
<i>* : Required Field</i>			

<b>Supplier Information</b>			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2017-03-17</b>
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	<b>Giovanni Giacobello</b>	<b>Representative Title</b>	<b>ADG MD Champion</b>
<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>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>

**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
VNP20N07-E	AUDZ*VN29BBC	A	3068	2017-03-17
Amount	UoM	Unit type	ST ECOPACK Grade	
1926.90	mg	Each	ECOPACK1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10-9.1-4.5	3	THROUGH HOLE
Comment	TO 220 AB NON ISOL		

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)

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	0.56	die backside metal-leadframe metal	289
Lead	9.05	soft solder	4694
Antimony trioxide	10.91	mold compound	5662

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	AUDZ*VN29B8C					
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	14.219	mg	supplier	die	Silicon (Si)	7440-21-3		13.958	mg	981644	7244
				supplier	metallization	Aluminium (Al)	7429-90-5		0.069	mg	4853	36
				supplier	Passivation	Silicon Nitride	12033-89-5		0.042	mg	2954	22
				supplier	Passivation	Silicon Oxide	7631-86-9		0.064	mg	4501	33
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	351	3
				supplier	back side metallization	Gold (Au)	7440-57-5		0.014	mg	985	7
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.067	mg	4712	35
Leadframe	Copper & its alloys	1253.535	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.752	mg	998578	649620
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		1.253	mg	1000	650
				supplier	metallization	Nickel (Ni)	7440-02-0		0.490	mg	391	254
				supplier	metallization	Phosphorus (P)	12185-10-3		0.040	mg	31	21
Soft solder	Solder	9.471	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	9.045	mg	955021	4694
				supplier	solder	Silver (Ag)	7440-22-4		0.237	mg	25023	123
				supplier	solder	Tin (Sn)	7440-31-5		0.189	mg	19956	98
Bonding wires	Other inorganic materials	1.471	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.464	mg	995241	760
				supplier	wire	Magnesium (Mg)	7439-95-4		0.007	mg	4759	4
				supplier	wire							
Encapsulation	Other Organic Materials	641.842	mg	supplier	mold compound	Silica vitreous	60676-86-0		500.637	mg	780000	259815
				supplier	mold compound	Bisphenol F type epoxy resin	9003-36-5		60.975	mg	95000	31644
				supplier	mold compound	Phenol resin	9003-35-4		53.915	mg	84000	27980
				supplier	mold compound	Antimony Trioxide	1309-64-4		10.911	mg	17000	5661
				supplier	mold compound	Brominated flame retardant	Proprietary		9.628	mg	15001	4997
				supplier	mold compound	Silica Cristobalite	14464-46-1		3.209	mg	5000	1665
				supplier	mold compound	Carbon Black	1333-86-4		2.567	mg	3999	1332
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3302