



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-11-16
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacopello	Representative Title	ADG MD Champion
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	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
VNB20N07-E	AUD2*VN29BBC	A	3068	2017-11-16
Amount	UoM	Unit type	ST ECOPACK Grade	
1380.00	mg	Each	ECOPACK1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	250	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-9.15-4.5	2	gull wing	
Comment	D2PAK			

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	0.14	Die - Leadframe	104
Lead	9.05	Soft solder	6554
Antimony trioxide	6.88	Encapsulation	4986

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	AUD2*VN2988C					
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	10114
				supplier	metallization	Aluminium (Al)	7429-90-5		0.069	mg	4853	50
				supplier	Passivation	Silicon Nitride	12033-89-5		0.042	mg	2954	30
				supplier	Passivation	Silicon Oxide	7631-86-9		0.064	mg	4500	46
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	352	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.014	mg	985	10
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.067	mg	4712	49
				supplier	alloy	Copper (Cu)	7440-50-8		777.537	mg	998594	563433
				supplier	alloy	Iron (Fe)	7439-89-6		0.358	mg	460	259
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.654	mg	840	474
Leadframe	Copper & its alloys	778.632	mg	supplier	metallization	Nickel (Ni)	7440-02-0		0.077	mg	98	56
				supplier	metallization	Phosphorus (P)	12185-10-3		0.006	mg	8	4
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	9.045	mg	955021	6554
				supplier	solder	Silver (Ag)	7440-22-4		0.237	mg	25023	172
				supplier	solder	Tin (Sn)	7440-31-5		0.189	mg	19956	137
				supplier	wire	Aluminium (Al)	7429-90-5		1.571	mg	995564	1138
Soft solder	Solder	9.471	mg	JIG - R	solder	Magnesium (Mg)	7439-95-4		0.007	mg	4436	5
				supplier	solder	Silica, vitreous	60676-86-0		462.331	mg	806001	335022
				supplier	solder	Epoxy Cresol Novolak	29690-82-2		40.153	mg	70000	29096
				supplier	mold compound	Phenol resin	9003-35-4		22.944	mg	39999	16626
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		34.417	mg	60001	24940
Bonding wires	Other inorganic materials	1.578	mg	supplier	wire	Antimony Trioxide	1309-64-4		6.883	mg	11999	4988
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		4.015	mg	7000	2909
				supplier	mold compound	Carbon black	1333-86-4		2.868	mg	5000	2078
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804
				supplier	mold compound	Phenol resin	9003-35-4		22.944	mg	39999	16626
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		34.417	mg	60001	24940
Encapsulation	Other Organic Materials	573.611	mg	supplier	mold compound	Phenol resin	9003-35-4		22.944	mg	39999	16626
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		34.417	mg	60001	24940
				supplier	mold compound	Antimony Trioxide	1309-64-4		6.883	mg	11999	4988
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		4.015	mg	7000	2909
				supplier	mold compound	Carbon black	1333-86-4		2.868	mg	5000	2078
Connections coating	Solder	2.489	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804