



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-04-11
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	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 *	Legal Declaration *
true	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
VN820PT-E	ATC4*VN82X3B	A	3068	2018-04-11
	Amount	UoM	Unit type	ST ECOPACK Grade
	258	mg	Each	ECOPACK1
	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
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SMC	6.4-6-2.2	5	S band	
Comment	PPACK 5 LEADS			

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 : California Prop65 list, dated 15th December 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	0.61	Die - Leadframe	2360
Lead	5.13	Soft solder	19872
Antimony trioxide	1.04	Mold compound	4031

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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	ATC4*VN82X3B						
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)	
Die	M-011 Other inorganic materials	5.689	mg	supplier	die	Silicon (Si)	7440-21-3		5.529	mg	971876	21430	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.034	mg	5976	132	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.039	mg	6855	151	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.038	mg	6680	147	
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	527	12	
				supplier	back side metallization	Gold (Au)	7440-57-5		0.008	mg	1406	31	
Leadframe	M-004 Copper and its alloys	159.714	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.038	mg	6680	147	
				supplier	alloy	Copper (Cu)	7440-50-8		158.658	mg	993388	614953	
				supplier	alloy	Iron (Fe)	7439-89-6		0.159	mg	995	616	
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.048	mg	301	186	
				supplier	metallization	Nickel (Ni)	7440-02-0		0.571	mg	3575	2213	
Soft solder	Solder	5.368	mg	supplier	metallization	Gold (Au)	7440-57-5		0.278	mg	1741	1078	
				supplier	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	5.127	mg	955104	19872
				supplier	solder	Silver (Ag)	7440-22-4		0.134	mg	24963	519	
				supplier	solder	Tin (Sn)	7440-31-5		0.107	mg	19933	415	
Bonding wires	M-011 Other inorganic materials	0.128	mg	supplier	wire	Gold (Au)	7440-57-5		0.046	mg	359375	178	
				supplier	wire	Aluminium (Al)	7429-90-5		0.082	mg	640625	319	
Encapsulation	M-011 Other inorganic materials	86.519	mg	supplier	mold compound	Silica, vitreous	60676-86-0		69.734	mg	805996	270287	
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		6.056	mg	69996	23473	
				supplier	mold compound	Phenol resin	9003-35-4		3.461	mg	40003	13415	
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		5.191	mg	59998	20120	
				supplier	mold compound	Antimony Trioxide	1309-64-4		1.038	mg	11997	4023	
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		0.606	mg	7005	2349	
Connections coating	Solder	0.582	mg	supplier	mold compound	Carbon black	1333-86-4		0.433	mg	5005	1678	
				supplier	solder alloy	Tin (Sn)	7440-31-5		0.582	mg	1000000	2256	