



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 *	2017-08-04
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacobello	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


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	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
	ARV5*VNV4ABC	A	0959	2017-08-04
Amount	UoM	Unit type	ST ECOPACK Grade	
470.00	mg	Each	ECOPACK2	

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	
QFP	10.3-7.5-2.28	24	Gull Wing	
Comment	Package: PowerSSO24 - MDF valid for CPs: VND5E025MKTR-E and VND5E025MK-E			

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	TRUE
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)	FALSE
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	0.06	die backside metal	123
Lead	7.86	soft solder	16717

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	ARV5*VNV4ABC					
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	9.104	mg	supplier	die	Silicon (Si)	7440-21-2		8.430	mg	925967	17936
				supplier	metallization	Aluminium (Al)	7429-90-5		0.059	mg	6480	126
				supplier	metallization	Copper (Cu)	7440-50-8		0.070	mg	7689	149
				supplier	metallization	Titanium (Ti)	7440-32-6		0.220	mg	24165	468
				supplier	Passivation	Silicon Nitride	12033-89-5		0.040	mg	4394	85
				supplier	Passivation	Silicon Oxide	7631-86-9		0.108	mg	11863	230
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	439	9
				supplier	back side metallization	Gold (Au)	7440-57-5		0.012	mg	1318	26
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.058	mg	6371	123
				supplier	polymer die coating	PIXL Gamma-butyrolactone	96-48-0		0.103	mg	11314	219
				Leadframe	Copper & its alloys	164.539	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						3.725	mg	22639	7926
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.224	mg	1362	477
supplier	alloy	Zinc (Zn)	7440-66-6						0.195	mg	1185	415
supplier	metallization	Silver (Ag)	7440-22-4						2.038	mg	12386	4336
Soft solder	Solder	8.059	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	7.857	mg	974935	16717
				supplier	solder	Silver (Ag)	7440-22-4		0.121	mg	15014	257
				supplier	solder	Tin (Sn)	7440-31-5		0.081	mg	10051	172
Bonding wires	Other inorganic materials	1.376	mg	supplier	wire	Gold (Au)	7440-57-5		1.119	mg	813227	2381
				supplier	wire	Copper (Cu)	7440-50-8		0.257	mg	186773	547
Encapsulation	Other Organic Materials	283.065	mg	supplier	mold compound	silica vitreous	60676-86-0		248.531	mg	878000	528789
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		16.984	mg	60000	36136
				supplier	mold compound	Phenol Resin	205830-20-2		11.323	mg	40001	24091
				supplier	mold compound	epoxy resin	25068-38-6		5.661	mg	19999	12045
				supplier	mold compound	carbon black	1333-86-4		0.566	mg	2000	1204
Connections coating	Solder	3.857	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.857	mg	1000000	8206