



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 *	2018-02-26
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		


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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
Legal Statement	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	RRVC*VH77AAX	A	0959	2018-02-26
Amount	UoM	Unit type	ST ECOPACK Grade	
488	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	36	gull wing	
Comment	Package: PwSSO36 DUAL CHIP - MDF valid for CPs: VNHD7012AYTR and VNHD7012AY			

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	0.03	Die	53
Lead	4.28	Soft solder	8777

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	RRVC*VH77AAX				6000000.0	1000000.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	M-011 Other inorganic materials	8.102	mg	supplier	die	Silicon (Si)	7440-21-3		7.553	mg	932239	15477
				supplier	metallization	Aluminium (Al)	7429-90-5		0.144	mg	17773	295
				supplier	metallization	Copper (Cu)	7440-50-8		0.052	mg	6418	107
				supplier	metallization	Titanium (Ti)	7440-32-6		0.011	mg	1358	23
				supplier	metallization	Tungsten (W)	7440-33-7		0.129	mg	15922	264
				supplier	Passivation	Silicon Oxide	7631-86-9		0.083	mg	10244	170
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	247	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.007	mg	864	14
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.026	mg	3209	53
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.002	mg	247	4
Leadframe	M-004 Copper and its alloys	161.653	mg	supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.093	mg	11479	191
				supplier	alloy	Copper (Cu)	7440-50-8		159.255	mg	985166	326342
				supplier	alloy	Iron (Fe)	7439-89-6		0.160	mg	990	328
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.048	mg	296	99
				supplier	metallization	Silver (Ag)	7440-22-4		2.190	mg	13548	4488
Soft solder	Solder	4.393	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	4.283	mg	974960	8777
				supplier	solder	Silver (Ag)	7440-22-4		0.066	mg	15024	135
				supplier	solder	Tin (Sn)	7440-31-5		0.044	mg	10016	90
Bonding wires	M-011 Other inorganic materials	3.053	mg	supplier	wire	Copper (Cu)	7440-50-8		3.053	mg	1000000	6256
				supplier	mold compound	Silica, vitreous	60676-86-0		264.856	mg	863998	542738
Encapsulation	M-011 Other inorganic materials	306.547	mg	supplier	mold compound	Epoxy Resin	25068-38-6		22.991	mg	75000	47113
				supplier	mold compound	Phenol Resin	29690-82-2		15.327	mg	49999	31408
				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		1.533	mg	5001	3141
				supplier	mold compound	Quartz	14808-60-7		0.920	mg	3001	1885
				supplier	mold compound	Carbon black	1333-86-4		0.920	mg	3001	1885
Connections coating	Solder	4.252	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.252	mg	1000000	8713