



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 *	2020-04-20
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	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
VND5E050ACJTR-E	ST0T*VNQ5BAC	A	64BA	2020-04-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	114	mg	Each	ECOPACK 1
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		
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00421185	



Package Designator	Size	Nbr of instances	Shape	
QFP	4.90,3.90,1.55	12	gull wing	
Comment	POWERSO-12			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 3rd January 2020			
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	0.04	die	326
Lead	2.95	soft solder	25956
Antimony trioxide	0.44	encapsulation	3877

QueryList : REACH-16th January 2020				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	2.95	Soft solder	25956
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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	2.946	Soft solder	924961

Material Composition Declaration :						Mfr Item Name	ST0T*VNQ5BAC					
note : Substance present with less 0.001mg will not be declared in this document												
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	5.850	mg	supplier	die	Silicon(Si)	7440-21-3		5.484	mg	937436	48317
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.034	mg	5812	300
				supplier	metallisation	Copper(Cu)	7440-50-8		0.045	mg	7692	396
				supplier	metallisation	Gold(Au)	7440-57-5		0.008	mg	1368	70
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.037	mg	6325	327
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.146	mg	24957	1286
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.026	mg	4444	229
Leadframe	M-004 Copper and its alloys	66.534	mg	supplier	passivation	Silicon oxide	7631-86-9		0.070	mg	11966	617
				supplier	alloy & coating	Copper(Cu)	7440-50-8		66.377	mg	997640	584819
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.031	mg	466	273
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.056	mg	842	493
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.070	mg	1052	617
Soft solder	Solder	3.185	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	2.946	mg	924961	25956
				supplier	solder	Tin(Sn)	7440-31-5		0.159	mg	49921	1401
				supplier	solder	Silver(Ag)	7440-22-4		0.080	mg	25118	705
Bonding wires	M-008 Precious metals	0.146	mg	supplier	wire	Gold(Au)	7440-57-5		0.146	mg	1000000	1286
Bonding wires 2	M-004 Copper and its alloys	0.341	mg	supplier	wire	Copper(Cu)	7440-50-8		0.341	mg	1000000	3004
Encapsulation	M-011 Other inorganic materials	36.472	mg	supplier	mold compound	Silica vitreous	60676-86-0		30.017	mg	823015	264467
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		2.553	mg	69999	22493
				supplier	mold compound	Phenol resin	9003-35-4		1.459	mg	40003	12855
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		1.094	mg	29996	9639
				supplier	mold compound	Antimony trioxide	1309-64-4		0.438	mg	12009	3859
				supplier	mold compound	Brominated epoxy resin	40039-93-8		0.729	mg	19988	6423
				supplier	mold compound	Carbon black	1333-86-4		0.182	mg	4990	1604
connections coating	Solder	0.972	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.972	mg	1000000	8564