



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-09-10
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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

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
	TMIY*VN86X3B	A	MU1A	2018-09-10
Amount	UoM	Unit type	ST ECOPACK Grade	
1074	mg	Each	ECOPACK® 2	
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		

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	
Not Applicable	Tin (Sn), hot dipped	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	9.40x7.5x0.05	10	gull wing	
Comment	IY PowerSO-10; MDF valid for VNQ860SPTR-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	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 : REACH-27th June 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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TMIY*VN86X3B				6000001.0	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)	
Die	M-011 Other inorganic materials	7.732	mg	supplier	die	Silicon (Si)	7440-21-3		7.515	mg	971935	6996	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.046	mg	5949	43	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.053	mg	6855	49	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.052	mg	6725	48	
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	517	4	
				supplier	back side metallization	Gold (Au)	7440-57-5		0.011	mg	1423	10	
Leadframe	M-004 Copper and its alloys	591.908	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.051	mg	6596	47	
				supplier	alloy	Copper (Cu)	7440-50-8		578.905	mg	978032	538892	
				supplier	alloy	Iron (Fe)	7439-89-6		0.265	mg	448	247	
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.484	mg	818	451	
Die attach	M-015 Other organic materials	0.862	mg	supplier	metallization	Silver (Ag)	7440-22-4		12.254	mg	20703	11407	
				supplier	JIG - R	soft solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	0.822	mg	953596	765
				supplier	soft solder	supplier	Silver (Ag)	7440-22-4		0.022	mg	25522	20
Bonding wires	M-008 Precious metals	0.504	mg	supplier	soft solder	Tin (Sn)	7440-31-5		0.018	mg	20882	17	
				supplier	wire	Gold (Au)	7440-57-5		0.504	mg	1000000	469	
Encapsulation	M-015 Other organic materials	462.862	mg	supplier	Molding Compound	Epoxy Resin	Proprietary		39.700	mg	85771	36956	
				supplier	Molding Compound	Phenol Resin	Proprietary		23.467	mg	50700	21845	
				supplier	Molding Compound	Silica, vitreous	60676-86-0		394.752	mg	852850	367468	
				supplier	Molding Compound	Quartz	14808-60-7		1.348	mg	2912	1255	
				supplier	Molding Compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		2.247	mg	4855	2092	
connections coating	M-011 Other inorganic materials	10.382	mg	supplier	Molding Compound	Carbon black	1333-86-4		1.348	mg	2912	1255	
				supplier	coating	Tin (Sn)	7440-31-5		10.382	mg	1000000	9664	