



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2016-05-16
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana San Biagio	Representative Title	AMG 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
	TNIY*VN54X3B	A	MU1A	2016-05-16
Amount	UoM	Unit type	ST ECOPACK Grade	
1081.22	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		
3	250	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	8.62x6.58x3.5	10	gull wing	
Comment	Package: IY PowerSO-10; MDF valid for VN540SP-E			

QueryList : ROHS directive 2011/65/EU _ July 2011	
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-17th December 2015				
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	TNIY*VN54X3B					
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	13.613	mg	supplier	die	Silicon (Si)	7440-21-3		13.376	mg	982590	12371
				supplier	metallization	Aluminium (Al)	7429-90-5		0.063	mg	4628	58
				supplier	Passivation	Silicon Nitride	12033-89-5		0.038	mg	2791	35
				supplier	Passivation	Silicon Oxide	7631-86-9		0.058	mg	4261	54
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	294	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.013	mg	955	12
Leadframe	Copper & its alloys	605.379	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.061	mg	4481	56
				supplier	alloy	Copper (Cu)	7440-50-8		602.072	mg	994537	556845
				supplier	alloy	Iron (Fe)	7439-89-6		0.301	mg	497	278
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.482	mg	796	446
				supplier	metallization	Nickel (Ni)	7440-02-0		0.131	mg	216	121
				supplier	metallization	Silver (Ag)	7440-22-4		2.392	mg	3951	2212
Soft solder	Other inorganic materials	7.710	mg	supplier	metallization	Phosphorus (P)	12185-10-3		0.001	mg	2	1
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	7.517	mg	974968	6952
				supplier	solder	Silver (Ag)	7440-22-4		0.116	mg	15045	107
				supplier	solder	Tin (Sn)	7440-31-5		0.077	mg	9987	71
				supplier	wire	Gold (Au)	7440-57-5		0.137	mg	290254	127
				supplier	wire	Aluminium (Al)	7429-90-5		0.335	mg	709746	310
Encapsulation	Other Organic Materials	453.271	mg	supplier	mold compound	Silica, vitreous	60676-86-0		391.626	mg	864000	362208
				supplier	mold compound	Epoxy Resin	Proprietary		33.995	mg	74999	31441
				supplier	mold compound	Phenol Resin	Proprietary		22.664	mg	50001	20962
				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		2.266	mg	4999	2096
				supplier	mold compound	Quartz	14808-60-7		1.360	mg	3000	1258
				supplier	mold compound	Carbon black	1333-86-4		1.360	mg	3000	1258
connections coating	Solder	0.775	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.775	mg	1000000	717