



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 *	2017-11-08
Company Unique ID	NL 008751171801		
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	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

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
	RVWV*VB48ADJ	A	ZS1A	2017-11-08
Amount	UoM	Unit type	ST ECOPACK Grade	
16	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	2.8x1.5x0.9	5	gull wing	
Comment	Package: WV SOT 23 5L; MDF valid for LDLN025M18R			

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

QueryList : REACH-7th July 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	RVWV*VB48ADJ				4999997.0	999944.0
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	0.249	mg	supplier	die	Silicon (Si)	7440-21-3		0.237	mg	951807	14813
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	12048	188
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	8032	125
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	4016	63
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	24096	375
Leadframe	M-004 Copper and its alloys	7.194	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.958	mg	967195	434875
				supplier	alloy	Phosphorus (P)	7723-14-0		0.001	mg	139	63
				supplier	alloy	Zinc (Zn)	7440-66-6		0.004	mg	556	250
				supplier	alloy	Iron (Fe)	7439-89-6		0.151	mg	20990	9438
				supplier	alloy	Nickel (Ni)	7440-02-0		0.072	mg	10008	4500
Die attach	M-008 Precious metals	0.069	mg	supplier	alloy	Palladium (Pd)	7440-05-3		0.007	mg	973	438
				supplier	alloy	Gold (Au)	7440-57-5		0.001	mg	139	63
				supplier	glue	Silver (Ag)	7440-22-4		0.059	mg	855072	3688
Bonding wires	M-015 Other organic materials	8.337	mg	supplier	glue	Carbocyclic acrylate	proprietary		0.007	mg	101449	438
				supplier	glue	DICYCLOPENTENYLOXYETHYL METHACRYLATE	68586-19-6		0.003	mg	43478	188
				supplier	wire	Gold (Au)	7440-57-5		0.150	mg	1000000	9375
				supplier	mold compound	Solid Epoxy Resin-1	Proprietary		0.167	mg	20031	10438
				supplier	mold compound	Solid Epoxy Resin-2	29690-82-2		0.167	mg	20031	10438
Encapsulation	M-015 Other organic materials	8.337	mg	supplier	mold compound	Phenol resin	25068-82-2		0.333	mg	39942	20813
				supplier	mold compound	Amorphous Silica	60676-86-0		7.420	mg	890008	463750
				supplier	mold compound	Carbon Black	1333-86-4		0.042	mg	5038	2625
				supplier	mold compound	Crystalline silica	14808-60-7		0.208	mg	24949	13000