



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 *	2018-02-09
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	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
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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
	MQCM*UBDB105	A	Z6HA	2018-02-09
Amount	UoM	Unit type	ST ECOPACK Grade	
1.94	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	
QFN	1.2x1.2x0.5	4	flat	
Comment	B047 XFFPN 1.2X1.2X0.50 4L PITCH 0.8; MDF valid for LD56050DPU105R			

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-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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	MQCM*UBDB105				5000000.0	998452.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	0.099	mg	supplier	die	Silicon (Si)	7440-21-3		0.090	mg	909091	46392
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	30303	1546
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	10101	515
				supplier	Passivation	Silicon Oxide	7631-86-9		0.005	mg	50505	2577
Leadframe	M-004 Copper and its alloys	0.867	mg	supplier	alloy	Copper (Cu)	7440-50-8		0.821	mg	946943	423196
				supplier	alloy	Silicon (Si)	7440-21-3		0.010	mg	11534	5155
				supplier	alloy	Magnesium (Mg)	7439-95-4		0.002	mg	2307	1031
				supplier	metallization	Nickel (Ni)	7440-02-0		0.034	mg	39216	17526
Die Attach	M-015 Other organic materials	0.003	mg	supplier	Glue	Silver (Ag)	7440-22-4		0.003	mg	1000000	1546
Bonding wires	M-008 Precious metals	0.029	mg	supplier	wire	Gold (Au)	7440-57-5		0.029	mg	1000000	14948
Encapsulation	M-015 Other organic materials	0.939	mg	supplier	molding compound	Epoxy resin	29690-82-2		0.009	mg	9585	4639
				supplier	molding compound	Phenol resin	25069-38-6		0.009	mg	9585	4639
				supplier	molding compound	Silica (Amorphous) A	60676-86-0		0.792	mg	843450	408247
				supplier	molding compound	Silica (Amorphous) B	7631-86-9		0.127	mg	135250	65464
				supplier	molding compound	Carbon Black	1333-86-4		0.002	mg	2130	1031