




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 *	2018-12-09
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 *	MDG MD CHAMPION	Representative Title	MDG 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	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L412CBT6	S05B*464XXXA	A	998Z	2018-12-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	185.46	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	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Tin (Sn), immersion	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	7X7X1.4	48	L Bend	
Comment	Package : 5B LQFP 48 7x7x1.4 1 0110596			

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-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 :						Mfr Item Name	S05B*464XXXA				6000000.0	1000025.8
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 or dies	M-011 Other inorganic materials	7.082	mg	supplier	die	Silicon (Si)	7440-21-3		6.808	mg	961310	36708
				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	1836	70
				supplier	metallization	Copper (Cu)	7440-50-8		0.116	mg	16380	625
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.038	mg	5366	205
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	141	5
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	141	5
				supplier	Passivation	Silicon Nitride	12033-89-5		0.030	mg	4236	162
				supplier	Passivation	Silicon Oxide	7631-86-9		0.075	mg	10590	404
				Supplier	Metals	Silver	7440-22-4		0.868	mg	901000	4677
				Supplier	Organic Compound	Highly cross-linked polymer	Proprietary		0.095	mg	99000	514
EMC_G631SHQ_Sumitomo	M-011 Other inorganic materials	118.064	mg	Supplier	Organic Compound	Epoxy Resin A	Proprietary		2.479	mg	21000	13369
				Supplier	Organic Compound	Epoxy Resin B	Proprietary		2.479	mg	21000	13369
				Supplier	Organic Compound	Phenol Resin	Proprietary		6.612	mg	56000	35651
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		92.143	mg	780450	496852
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		13.615	mg	115320	73415
				Supplier	Additives	Carbon Black	1333-86-4		0.736	mg	6230	3966
BondingWire_Ag_MKE	Bonding Wire	0.405	mg	Supplier	Metals	Silver	7440-22-4		0.389	mg	960000	2098
				Supplier	Metals	Others	Proprietary		0.016	mg	40000	87
Anode Ball_Tin_Asahi	Metals	2.941	mg	Supplier	Metals	Tin	7440-31-5		2.941	mg	1000000	15858
Leadframe_C9+Ag_HDS	Metals	56.007	mg	Supplier	Metals	Iron	7439-89-6		1.225	mg	21865	6603
				Supplier	Non-metals	Phosphorus	7723-14-0		0.041	mg	730	220
				Supplier	Metals	Zinc	7440-66-6		0.063	mg	1125	340
				Supplier	Metals	Copper	7440-50-8		51.148	mg	913235	275782
				Supplier	Metals	Silver	7440-22-4		3.528	mg	63000	19025
				JIG-R	Metals	Lead	7439-92-1		0.003	mg	45	14