



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 *	2013-01-09
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Patrizia Santoro	Representative Title	AMS/IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp		

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
STL70N4LLF5	BSER*5H4CB52	A	SH1A	2013-01-09
Amount		UoM	Unit type	ST ECOPACK Grade
76.00		mg	Each	ECOPACK® 2

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 ; if coating is used bright, annealed Tin/Silver/Bismuth (Sn/Ag/Bi)				

Package Designator	Size	Nbr of instances	Shape	
DSO	6X5X1	2	J inverted	
Comment	Package: QFN POWER FLAT 5x6 8L SINGLE			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList :REACH-18 June 2012				
Query				Response
The product 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	BSER*5H4CB52					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	2.143	mg	supplier	die	Silicon (Si)	7440-21-3		2.12	mg	989267	27895
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	467	13
						Gold (Au)	7440-57-5		0.004	mg	1867	53
						Nickel (Ni)	7440-02-0		0.017	mg	7933	224
						Vanadium (V)	7440-62-2		0.001	mg	467	13
Leadframe	Copper & its alloys	30.388	mg	supplier	alloy	Copper (Cu)	7440-50-8		29.834	mg	981769	392553
						Iron (Fe)	7439-89-6		0.014	mg	461	184
						Iron Phosphide (FeP)	26508-33-8		0.025	mg	823	329
				supplier	frame coating	Silver (Ag)	7440-22-4		0.515	mg	16947	6776
						Lead (Pb)	7439-92-1	7a-Lead in high me	2.061	mg	955051	27118
Die attach	Other Organic Materials	2.158	mg	JIG R	soft solder	Silver (Ag)	7440-22-4		0.054	mg	25023	711
						Tin (Sn)	7440-31-5		0.043	mg	19926	566
						Gold (Au)	7440-57-5		0.142	mg	18808	1868
Bonding wire	Other inorganic materials	0.142	mg	supplier	wire	Gold (Au)	7440-57-5		0.142	mg	18808	1868
Frame clip	Other inorganic materials	7.408	mg		frame clip	Copper (Cu)	7440-50-8		7.408	mg	981192	97474
encapsulation	Other Organic Materials	33.736	mg	supplier	mold compound	Silica, vitreous	60676-86-0		31.24	mg	926014	411053
						epoxy resin	85954-11-6		1.349	mg	39987	17750
						phenol resin	26834-02-6		1.012	mg	29998	13316
						carbon black	1333-86-4		0.135	mg	4002	1776
connections coating	Other inorganic materials	0.025	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.025	mg	1000000	329