



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2015-09-18
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Antonella Lanzafame/R Bonaccorso	Representative Title	ADG 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

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
	TLDZ*MM2GB61	A	BOUSKOURA B/E	2015-09-18
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	10, 9.1, 4.5	3	THROUGH HOLE	
Comment	Package: TO 220 AB NON ISOL. MDF valid for CP: STP20NF20			

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	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
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	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-20th June 2016				
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	TLDZ*MM2GB61					
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	15.295	mg	supplier	die	Silicon (Si)	7440-21-3		15.029	mg	982609	7910
				supplier	metallization	Aluminium (Al)	7429-90-5		0.030	mg	1961	16
				supplier	Passivation	Silicon Nitride	12033-89-5		0.020	mg	1308	11
				supplier	Passivation	Silicon Oxide	7631-86-9		0.142	mg	9284	75
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	261	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.052	mg	3400	27
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.018	mg	1177	9
Leadframe	Copper & its alloys	1259.453	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	993587	658619
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	995	659
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	299	198
				supplier	metallization	Nickel (Ni)	7440-02-0		6.408	mg	5088	3373
				supplier	metallization	Phosphorus (P)	12185-10-3		0.040	mg	31	21
Soft solder	Solder	7.233	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	6.907	mg	954929	3635
				supplier	solder	Silver (Ag)	7440-22-4		0.181	mg	25024	96
				supplier	solder	Tin (Sn)	7440-31-5		0.145	mg	20047	76
Bonding wires	Other inorganic materials	1.324	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.323	mg	999245	696
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	755	1
Encapsulation	Other Organic Materials	610.333	mg	supplier	mold compound	Silica, vitreous	60676-86-0		530.990	mg	870000	279468
				supplier	mold compound	Epoxy resin	25068-38-6		61.033	mg	100000	32123
				supplier	mold compound	Phenol resin	29690-82-2		15.258	mg	24999	8031
				supplier	mold compound	Carbon Black	1333-86-4		3.052	mg	5001	1606
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348