



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 *	2016-01-21
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Antonella Lanzafame	Representative Title	IPD 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
	TLDZ*BD01T6F	A	Z8GA	2016-01-21
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
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 - 9.05 - 4.4	3	Through-hole	
Comment	Package: TO 220 AB NON ISOL, MD valid for CP:BDX34C,BDX54C, TIP125, TIP127			

QueryList : ROHS directive 2011/65/EU _ July 2011	
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-17th December 2015				
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	TLD2*BD01T6F					
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	2.019	mg	supplier	die	Silicon (Si)	7440-21-3		1.934	mg	957858	1017
				supplier	metallization	Aluminium (Al)	7429-90-5		0.029	mg	14378	15
				supplier	Passivation	Silicon Oxide	7631-86-9		0.033	mg	16361	17
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	496	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.016	mg	7933	8
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.006	mg	2975	3
Leadframe	Copper & its alloys	1097.568	mg	supplier	alloy	Copper(CU)	7440-50-8		1095.868	mg	998451	576446
				supplier	alloy	Iron(Fe)	7439-89-6		1.097	mg	999	577
				supplier	metallization	Phosphorus(P)	12185-10-3		0.329	mg	300	173
				supplier	metallization	Nickel	7440-02-0		0.274	mg	250	144
				supplier	Soft Solder	Tin(Sn)	7440-31-5		0.069	mg	20093	36
Soft solder	Solder	3.436	mg	supplier	Soft Solder	Silver(Ag)	7440-22-4		0.086	mg	25044	45
				JIG - R	Soft Solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.281	mg	954863	1726
				supplier	wire	Aluminum(Al)	84195-93-7		4.222	mg	1000000	2221
Bonding wire	Other inorganic materials	4.222	mg	supplier	wire	Aluminum(Al)	84195-93-7		4.222	mg	1000000	2221
	Other inorganic materials	766.646	mg	supplier	Molding compound	Silica Fused	60676-86-0		613.317	mg	799999	322615
				supplier	Molding compound	Epoxy Resin	Proprietary		76.665	mg	100001	40327
				supplier	Molding compound	Phenol Resin	Proprietary		49.832	mg	65000	26213
				supplier	Molding compound	Carbon Black	14808-60-7		26.832	mg	34999	14114
Connections coating	Solder	26.109	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		26.109	mg	1000000	13734