



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 *	2017-05-24
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Antonella Lanzafame	Representative Title	AMG 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

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
LDL212DR	PZ07*UI99ABE	A	SH1A	2017-05-24
	Amount	UoM	Unit type	ST ECOPACK Grade
	80.00	mg	Each	ECOPACK® 3
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

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	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.85x3.9x1.52	8	gull wing	
Comment	Package: 07 SO 08 .15 JEDEC			

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-12th January 2017				
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	PZ07*UI99ABE					
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	0.510	mg	supplier	die	Silicon (Si)	7440-21-3		0.498	mg	976471	6225
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	5882	38
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1961	13
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	1961	13
Leadframe	Copper & its alloys	35.114	mg	supplier	Passivation	Silicon Oxide	7631-86-9		0.007	mg	13725	88
				supplier	alloy	Copper (Cu)	7440-50-8		34.057	mg	969898	425713
				supplier	alloy	Iron (Fe)	7439-89-6		0.801	mg	22811	10013
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.048	mg	1367	600
				supplier	alloy	Zinc (Zn)	7440-66-6		0.042	mg	1196	525
				supplier	metallization	Nickel (Ni)	7440-02-0		0.151	mg	4300	1888
				supplier	metallization	Palladium (Pd)	7440-05-3		0.005	mg	142	63
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	142	63
Die attach	Other Organic Materials	0.221	mg	supplier	metallization	Silver (Ag)	7440-22-4		0.005	mg	142	63
				supplier	glue	Silver (Ag)	7440-22-4		0.195	mg	882353	2438
				supplier	glue	Isobornyl Methacrylate	7534-94-3		0.011	mg	49774	138
				supplier	glue	Urethane Methacrylate Resin	5888-33-5		0.011	mg	49774	138
Bonding wires	Other inorganic materials	0.080	mg	supplier	glue	Acrylate polymer	87320-05-6		0.004	mg	18100	50
				supplier	wire	Copper (Cu)	7440-50-8		0.080	mg	1000000	1000
				supplier	wire	Copper (Cu)	7440-50-8		0.080	mg	1000000	1000
Encapsulation	Other Organic Materials	44.075	mg	supplier	mold compound	Silica, vitreous	60676-86-0		38.169	mg	866001	477113
				supplier	mold compound	Epoxy Resin	Proprietary		3.306	mg	75009	41325
				supplier	mold compound	Phenol Resin	Proprietary		2.204	mg	50006	27550
				supplier	mold compound	Carbon black	1333-86-4		0.220	mg	4991	2750
				supplier	mold compound	Bismuth compound	7440-69-9		0.176	mg	3993	2200