



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 *	2018-09-12
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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

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
	HZDJ*L3171A6	A	SH1A	2018-09-12
Amount	UoM	Unit type	ST ECOPACK Grade	
1380.0	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
1	245	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.20x9.15x4.5	2	gull wing	
Comment	DJ D2PAK CENTRAL LEAD CUT; MDF valid for LM317D2T-TR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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
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-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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	2.49	solder	1801

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HZDJ*L3171A6				5999999.0	9999999.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	3.063	mg	supplier	die	Silicon (Si)	7440-21-3		2.965	mg	968005	2149
				supplier	metallization	Aluminium (Al)	7429-90-5		0.038	mg	12406	28
				supplier	Passivation	Silicon Nitride	12033-89-5		0.013	mg	4244	9
				supplier	Passivation	Silicon Oxide	7631-86-9		0.017	mg	5550	12
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	653	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.021	mg	6856	15
Leadframe	M-004 Copper and its alloys	779.567	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.007	mg	2285	5
				supplier	alloy	Copper (Cu)	7440-50-8		777.537	mg	997396	563433
				supplier	alloy	Iron (Fe)	7439-89-6		0.358	mg	459	259
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.654	mg	839	474
				supplier	metallization	Nickel (Ni)	7440-02-0		1.012	mg	1298	733
Soft solder	Solder	2.603	mg	SVHC	solder	Phosphorus (P)	7723-14-0		0.006	mg	8	4
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.486	mg	955052	1801
				supplier	solder	Silver (Ag)	7440-22-4		0.065	mg	24971	47
Bonding wires	M-011 Other inorganic materials	0.402	mg	supplier	solder	Tin (Sn)	7440-31-5		0.052	mg	19977	38
				supplier	wire	Copper (Cu)	7440-50-8		0.402	mg	1000000	291
Encapsulation	M-011 Other inorganic materials	591.876	mg	supplier	mold compound	Silica, vitreous	60676-86-0		517.892	mg	875001	375284
				supplier	mold compound	Tetramethyl-biphenyl-diy-bis oxymethylene-b	85954-11-6		23.675	mg	40000	17156
				supplier	mold compound	Epoxy Resin	Proprietary		17.756	mg	30000	12867
				supplier	mold compound	phenol resin	Proprietary		29.594	mg	50000	21445
connections coating	Solder	2.489	mg	supplier	mold compound	Carbon black	1333-86-4		2.959	mg	4999	2144
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804