



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Sectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-12-04
Company Unique ID	NL 008751171801		
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 *	Giovanni Giacobello	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
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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
SMAJ12A-TR	8HSR*TWU014C	A	ZA41	2017-12-04
Amount	UoM	Unit type	ST ECOPACK Grade	
70	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	260	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	
SOJ	4.3 x 2.77 x 2	2	J bend	
Comment	Package: SMA			

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
Exemption Id.	Description		
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)		

QueryList : California Prop65 list, dated 7th July 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.01	Die	171
Lead	2.62	Soft solder	37443

QueryList : REACH-7th July 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	8HSR*TWU014C					
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	1.127	mg	supplier	die	Silicon (Si)	7440-21-3		1.092	mg	968944	15600
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	5324	86
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	4437	71
				supplier	passivation	Nickel (Ni)	7440-02-0		0.005	mg	4437	71
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	5324	86
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	3549	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1775	29
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	6210	100
Leadframe & clip	M-004 Copper and its alloys	26.755	mg	supplier	alloy	Copper (Cu)	7440-50-8		26.742	mg	999514	382029
				supplier	alloy	Zinc (Zn)	7440-66-6		0.001	mg	37	14
				supplier	alloy	Iron (Fe)	7439-89-6		0.003	mg	112	43
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.009	mg	337	129
				supplier	solder	Silver (Ag)	7440-22-4		0.070	mg	24709	1000
Soft solder	Solder	2.833	mg	supplier	solder	Tin (Sn)	7440-31-5		0.142	mg	50123	2027
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	2.621	mg	925168	37443
				supplier	mold compound	Amorphous Silica	7631-86-9		23.816	mg	616213	340229
Encapsulation	M-011 Other inorganic materials	38.649	mg	supplier	mold compound	Quartz	14808-60-7		7.729	mg	199979	110414
				supplier	mold compound	epoxy resin	Proprietary		4.638	mg	120003	66257
				supplier	mold compound	phenolic resin	9003-35-4		2.319	mg	60002	33129
				supplier	mold compound	Bismuth trioxide	1304-76-3		0.027	mg	699	386
				supplier	mold compound	chlorine residue	7782-50-5		0.004	mg	103	57
				supplier	mold compound	Carbon black	1333-86-4		0.116	mg	3001	1657
Connections coating	Solder	0.636	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.636	mg	1000000	9086