



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 *	2016-01-04
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	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

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
SMAJ188A-TR	8HST*TWU221D	A	BOUSKOURA B/E	2016-01-04
Amount		UoM	Unit type	ST ECOPACK Grade
70.00		mg	Each	ECOPACK2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
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	
SOJ	4.14, 2.76, 1.94	2	J BEND	
Comment	SMA			

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	8HST*TWU221D					
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	1.602	mg	supplier	die	Silicon (Si)	7440-21-3		1.573	mg	981898	22471
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	3121	71
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	3745	86
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.006	mg	3745	86
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1248	29
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.010	mg	6242	143
Leadframe	Copper & its alloys	30.254	mg	supplier	alloy	Copper (Cu)	7440-50-8		29.767	mg	983903	425243
				supplier	alloy	Iron (Fe)	7439-89-6		0.030	mg	992	429
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.009	mg	297	129
				supplier	metallization	Nickel (Ni)	7440-02-0		0.445	mg	14709	6357
				supplier	metallization	Phosphorus (P)	12185-10-3		0.003	mg	99	43
				supplier	metallization	Phosphorus (P)	12185-10-3		0.003	mg	99	43
Soft solder	Solder	1.568	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.466	mg	934949	20943
				supplier	solder	Tin (Sn)	7440-31-5		0.078	mg	49745	1114
				supplier	solder	Silver (Ag)	7440-22-4		0.024	mg	15306	343
Encapsulation	Other Organic Materials	24.354	mg	supplier	mold compound	Silica, vitreous	60676-86-0		18.509	mg	759998	264414
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		2.484	mg	101996	35486
				supplier	mold compound	Phenol resin	9003-35-4		1.461	mg	59990	20871
				supplier	mold compound	Others	Proprietary		1.218	mg	50012	17400
				supplier	mold compound	Metal hydroxide	21645-51-2		0.487	mg	19997	6957
				supplier	mold compound	Carbon black	1333-86-4		0.195	mg	8007	2786
Connections coating	Solder	0.741	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.741	mg	1000000	10586
Clip	Copper & its alloys	11.481	mg	supplier	alloy	Copper (Cu)	7440-50-8		11.481	mg	1000000	164014