



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-03-14
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 *	Rossana Bonaccorso	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

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
	8HVV*TWU101N	A	ZA41	2019-03-14
Amount	UoM	Unit type	ST ECOPACK Grade	
2050	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	
Not Applicable	Not Applicable	Not Applicable		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
RAD	27.8 - 8.5 - 8.5	2	Through-hole
Comment	Package: R6 - MDF valid for CPs: BZW50-82 and BZW50-82RL		

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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 26th October 2018			
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	0.23	Die	112
Lead	2.66	Soft solder	1298

QueryList : REACH-15th January 2019				
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	2.66	soft solder	1298
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	2.66	soft solder	925217

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	8HVW*TWU101N					
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	22.424	mg	supplier	die	Silicon (Si)	7440-21-3		21.741	mg	969542	10605
				supplier	metallization	Aluminium (Al)	7429-90-5		0.126	mg	5619	61
				supplier	metallization	Gold (Au)	7440-57-5		0.090	mg	4014	44
				supplier	metallization	Nickel (Ni)	7440-02-0		0.091	mg	4058	44
				supplier	passivation	Silicon Oxide	7631-86-9		0.124	mg	5529	60
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.084	mg	3746	41
				supplier	back side metallization	Gold (Au)	7440-57-5		0.030	mg	1338	15
Leadframe	Copper & its alloys	1096.549	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.138	mg	6154	67
				supplier	alloy	Copper (Cu)	7440-50-8		1095.999	mg	999498	534634
				supplier	alloy	Zinc (Zn)	7440-66-6		0.046	mg	43	22
				supplier	alloy	Iron (Fe)	7439-89-6		0.109	mg	99	53
				supplier	alloy	Phosphorus (P)	12185-10-3		0.395	mg	360	193
Solder balls	Other organic materials	2.875	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.660	mg	925217	1298
				supplier	solder	Tin (Sn)	7440-31-5		0.144	mg	50087	70
				supplier	solder	Silver (Ag)	7440-22-4		0.071	mg	24696	35
Encapsulation	Other organic materials	907.091	mg	supplier	mold compound	Silica fused(SiO2)	7631-86-9		362.839	mg	400003	176995
				supplier	mold compound	silica quartz	14808-60-7		521.577	mg	575000	254428
				supplier	mold compound	phenolic resin	9003-35-4		18.142	mg	20000	8850
				supplier	mold compound	carbon black	1333-86-4		4.533	mg	4997	2211
Connections coating	Solder	21.061	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		21.061	mg	1000000	10274