



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 *	2018-09-26
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


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
FERD30SM100DJFTR	RFER*AAV2360	A	Z8GA	2018-09-26
	Amount	UoM	Unit type	ST ECOPACK Grade
	90.00	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	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	5-6-0.8	12	flat	
Comment	Package: Power FLAT 5x6 8L SINGLE			

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 25th May 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	0.04	Die	433
Lead	2.89	Soft solder	32100

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	2.89	Soft solder	32100
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	2.89	Soft solder	854987

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	RFR*AAV2360					
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	5.016	mg	supplier	die	Silicon (Si)	7440-21-3		4.764	mg	949761	52933
				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	5582	311
				supplier	metallization	Copper (Cu)	7440-50-8		0.092	mg	18341	1022
				supplier	metallization	Titanium (Ti)	7440-32-6		0.071	mg	14155	789
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	598	33
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.039	mg	7775	436
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.003	mg	598	33
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.016	mg	3190	178
Leadframe	Copper and its alloy	32.257	mg	Supplier	alloy	Copper(CU)	7440-50-8		31.429	mg	974331	349211
				Supplier	alloy	Iron(Fe)	7439-89-6		0.758	mg	23499	8422
				Supplier	alloy	Phosphorus(P)	7723-14-0		0.027	mg	837	300
				Supplier	alloy	Zinc(Zn)	7440-66-6		0.040	mg	1240	444
				Supplier	alloy	Silver(Ag)	7440-22-4		0.003	mg	93	33
Die Attach	Other Organic Material	3.467	mg	Supplier	solder	Tin(Sn)	7440-31-5		0.067	mg	19828	744
				Supplier	solder	Silver(Ag)	7440-22-4		0.086	mg	25451	956
				Supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	2.889	mg	854987	32100
				Supplier	solder	dry flux residue	Proprietary		0.337	mg	99734	3744
Bonding wire	Other Inorganic Material	1.705	mg	Supplier	ribbon	Aluminium (Al)	7429-90-5		1.662	mg	1000000	18467
				Supplier	mold compound	silica vitreous	60676-86-0		40.048	mg	885000	444978
Encapsulation	Other Organic Material	46.420	mg	Supplier	mold compound	Biphenyl epoxy resin	85954-11-6		2.398	mg	52992	26644
				Supplier	mold compound	Phenol Resin	205830-20-2		1.810	mg	39998	20111
				Supplier	mold compound	epoxy resin	25068-38-6		0.905	mg	19999	10056
				Supplier	mold compound	carbon black	1333-86-4		0.091	mg	2011	1011
Connections coating	Other Inorganic Material	2.497	mg	Supplier	solder alloy	Tin(Sn)	7440-31-5		2.434	mg	1000000	27044