



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-07-27
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG MD Champion
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**


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Legal Statement			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
FERD20L60CTS	HT)K*EIU336V	A	3068	2017-07-27
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380.00	mg	Each	ECOPACK2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-9.15-4.5	4	Through-hole	
Comment	TO220 - SINGLE GAUGE			

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)

Query : California Prop65 list, dated 27th January 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	0.03	die backside metal	20
Lead	4.18	soft solder	3030

QueryList : REACH-12th January 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	HTJK*EU336V					
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	3.442	mg	supplier	die	Silicon (Si)	7440-21-3		3.269	mg	949739	2369
				supplier	metallization	Aluminium (Al)	7429-90-5		0.019	mg	5520	14
				supplier	metallization	Copper (Cu)	7440-50-8		0.063	mg	18303	46
				supplier	metallization	Titanium (Ti)	7440-32-6		0.049	mg	14236	36
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	581	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.027	mg	7844	20
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.002	mg	581	1
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.011	mg	3196	8
Leadframe	Copper & its alloys	761.584	mg	supplier	alloy	Copper (Cu)	7440-50-8		760.594	mg	998700	551155
				supplier	alloy	Iron (Fe)	7439-89-6		0.350	mg	460	254
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.640	mg	840	464
Soft solder	Solder	4.378	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	4.181	mg	955002	3030
				supplier	solder	Silver (Ag)	7440-22-4		0.109	mg	24897	79
				supplier	solder	Tin (Sn)	7440-31-5		0.088	mg	20101	63
Bonding wires	Other inorganic materials	4.706	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.706	mg	1000000	3410
				supplier	mold compound	Silica, vitreous	60676-86-0		519.745	mg	870000	376627
Encapsulation	Other Organic Materials	597.408	mg	supplier	mold compound	Epoxy resin	25068-38-6		59.741	mg	100000	43291
				supplier	mold compound	Phenol resin	29690-82-2		14.935	mg	25000	10822
				supplier	mold compound	Carbon Black	1333-86-4		2.987	mg	5000	2164
				supplier	mold compound	Carbon Black	1333-86-4		2.987	mg	5000	2164
Connections coating	Solder	8.482	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		8.482	mg	1000000	6146