



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 *	2016-04-19
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Emilio Castelli	Representative Title	APG 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/online_tech_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
VND7004AYTR	RRVC*VH48CDX	A	MU1A	2016-04-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	488.00	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
CHP	7.5x10.3	36	gull wing	
Comment				

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7a' exemption (other selected exemptions may apply)	true
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-17th Dec 2015				
Query				Response
The product 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	RRVC*VH48CDX					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dice	Other inorganic materials	13.782	mg	supplier	die	Silicon (Si)	7440-21-3		13.120	mg	951966	26885
Dice				supplier	metallization	Aluminium (Al)	7429-90-5		0.252	mg	18285	516
Dice				supplier	metallization	Titanium (Ti)	7440-32-6		0.018	mg	1306	37
Dice				supplier	metallization	Tungsten (W)	7440-33-7		0.157	mg	11392	322
Dice				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.145	mg	10521	297
Dice				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	363	10
Dice				supplier	back side metallization	Gold (Au)	7440-57-5		0.016	mg	1161	33
Dice				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.064	mg	4644	131
Dice				supplier	back side metallization	Vanadium (V)	7440-62-2		0.005	mg	363	10
Leadframe	Copper & Its alloys	226.064	mg	supplier	alloy	Copper (Cu)	7440-50-8		218.278	mg	965558	447291
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		5.134	mg	22710	10520
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.309	mg	1367	633
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.269	mg	1190	551
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		2.074	mg	9174	4250
Die attach		0.244	mg	supplier	tape	Acrylic resin	9003-01-4		0.154	mg	631148	316
Die attach				supplier	tape	epoxy resin	Proprietary		0.090	mg	368852	184
Soft solder		7.798	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	7.603	mg	974994	15580
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.117	mg	15004	240
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.078	mg	10003	160
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		2.863	mg	1000000	5867
encapsulation		231.222	mg	supplier	mold compound	Phenol Resin	205830-20-2		9.249	mg	40001	18953
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		6.937	mg	30001	14215
encapsulation				supplier	mold compound	epoxy resin	Proprietary		6.937	mg	30001	14215
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.462	mg	1998	947
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		207.637	mg	897998	425486
connections coating	Solder	6.027	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.027	mg	1000000	12350