



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 *	2015-01-09
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

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
VND5E012MYTR-E	ARVC*VH28ABX	A	MU1A	2015-01-09
	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	10.3x7.5x2.2	36	flat	
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-16th June 2014				
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	ARVC*VH28ABX					
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	10.859	mg	supplier	die	Silicon (Si)	7440-21-3		10.212	mg	940418	20926
Die				supplier	metallization	Titanium (Ti)	7440-32-6		0.270	mg	24864	553
Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.048	mg	4420	98
Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.132	mg	12156	270
Die				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	368	8
Die				supplier	back side metallization	Gold (Au)	7440-57-5		0.011	mg	1013	23
Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.050	mg	4604	102
Die				supplier	glass coating	Glass: Silicon Dioxide (SiO2)	7631-86-9		0.132	mg	12156	270
Leadframe	Copper & its alloys	225.881	mg	supplier	alloy	Copper (Cu)	7440-50-8		218.099	mg	965548	446924
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		5.130	mg	22711	10512
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.309	mg	1368	633
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.269	mg	1191	551
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		2.074	mg	9182	4250
Die attach		0.360	mg	supplier	Glue	Poly(tetrafluoroethylene)	9002-84-0		0.184	mg	511111	377
Die attach				#N/A	Glue	Synthetic resin	Proprietary		0.072	mg	200000	148
Die attach				#N/A	Glue	Bismaleimide resin	Proprietary		0.072	mg	200000	148
Die attach				supplier	Glue	Titanium dioxide	13463-67-7		0.014	mg	38889	29
Die attach				supplier	Glue	Silica, amorphous	7631-86-9		0.018	mg	50000	37
Die attach 2		0.361	mg	supplier	Tape	polyolefin	9003-07-0		0.114	mg	315789	234
Die attach 2				supplier	tape	epoxy resin	25068-38-6		0.229	mg	634349	469
Die attach 2				supplier	tape	Diphenol Propane Diglycidyl Ether	1675-54-3		0.018	mg	49861	37
Soft solder		5.600	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	5.460	mg	975000	11189
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.084	mg	15000	172
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.056	mg	10000	115
Bonding wire		2.066		supplier	wire	Gold (Au)	7440-57-5		0.647	mg	313166	1326
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		1.419	mg	686834	2908
encapsulation		236.847	mg	supplier	mold compound	Phenol Resin	205830-20-2		9.474	mg	40001	19414
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		7.105	mg	29998	14559
encapsulation				#N/A	mold compound	epoxy resin	na		7.105	mg	29998	14559
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.474	mg	2001	971
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		212.689	mg	898002	435838
connections coating	Solder	6.027	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.027	mg	1000000	12350