



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 *	2013-09-26
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 *	Giovanni Giacopello	Representative Title	AMS & IPD Materials Declaration 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
	CRWU*DB332PC	A	ZS1A	2013-09-26
Amount	UoM	Unit type	ST ECOPACK Grade	
10.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte, annealed	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	2.9 - 2 - 1.175	3	gull wing	
Comment	Package: SOT 23 DIODES SERIE			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
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-19 Dec 2012				
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	CRWU*DB332PC					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon Die	Other inorganic materials	0.285	mg	supplier	Silicon Die	Silicon (Si)	7440-21-3		0.277	mg	971930	27700
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	21053	600
Silicon Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.002	mg	7018	200
Lead-frame	Other inorganic materials	2.918	mg	supplier	alloy	Copper (Cu)	7440-50-8		2.817	mg	965387	281700
Lead-frame				supplier	alloy	Iron (Fe)	7439-89-6		0.066	mg	22618	6600
Lead-frame				supplier	alloy	Phosphorus (P)	12185-10-3		0.001	mg	343	100
Lead-frame				supplier	alloy	Zinc (Zn)	7440-66-6		0.004	mg	1371	400
Lead-frame				supplier	metallization	Silver (Ag)	7440-22-4		0.03	mg	10281	3000
Die attach	Other inorganic materials	0.029	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		0.024	mg	827586	2400
Die attach				supplier	glue or tape	Carbocyclic Acrylates	proprietary		0.003	mg	103448	300
Die attach				supplier	glue or tape	Bismaleimide resin	proprietary		0.001	mg	34483	100
Die attach				supplier	glue or tape	2-preponic acid, 2-methyl	68586-19-6		0.001	mg	34483	100
Bonding wire	Other inorganic materials	0.03	mg	supplier	Bonding wire	Copper (Cu)	7440-50-8		0.029	mg	966667	2900
Bonding wire				supplier	Bonding wire	Palladium (Pd)	7440-05-3		0.001	mg	33333	100
encapsulation	Other inorganic materials	6.538	mg	supplier	Molding compound	Silica, vitreous	60676-86-0		5.578	mg	853166	557800
encapsulation				supplier	Molding compound	phenolic resin	Proprietary		0.229	mg	35026	22900
encapsulation				supplier	Molding compound	epoxy resin	Proprietary		0.261	mg	39920	26100
encapsulation				supplier	Molding compound	Biphenyl epoxy resin	85954-11-6		0.131	mg	20037	13100
encapsulation				supplier	Molding compound	carbon black	1333-86-4		0.013	mg	1988	1300
encapsulation				supplier	Molding compound	Zinc hydroxide	20427-58-1		0.065	mg	9942	6500
encapsulation				supplier	Molding compound	Magnesium hydroxide	1309-42-8		0.261	mg	39920	26100
Finishing	Solder	0.2	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.2	mg	1000000	20000