



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 *	2015-09-07
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 Giacobello	Representative Title	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/internet/com/support/online_tech_support.jsp		

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
	TSLZ*BT24E6S	A	Z4LA	2015-09-07
Amount	UoM	Unit type	ST ECOPACK Grade	
5200.00	mg	Each	ECOPACK® 1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used c	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	15.5X14.5X5.7	3	Through-hole	
Comment	Package:TO-3PF/ISOWATT 218; MDF valid for BU508AF; MD2001FX			

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 '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
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
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : REACH-15th June 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		TSL2*BT24E65					
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	10.671	mg	supplier	die	Silicon (Si)	7440-21-3		10.118	mg	948177	1946	
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.287	mg	26895	55	
Die				supplier	Passivation	Silicon Oxide	7631-86-9		0.164	mg	15369	32	
Die Attach				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.006	mg	562	1	
Die Attach				supplier	back side metallization	Gold (Au)	7440-57-5		0.017	mg	1593	3	
Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.079	mg	7403	15	
Leadframe	Copper & its alloys	2359.283	mg	supplier	alloy	Copper (Cu)	7440-50-8		2346.013	mg	894375	451156	
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		2.504	mg	19159	12	
Leadframe				supplier	alloy	Phosphorus (P)	12185-10-3		10.015	mg	1545	1	
Leadframe				supplier	alloy	Nickel (Ni)	7440-02-0		0.751	mg	7726	5	
Soft solder	Solder	18.77	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	17.549	mg	894375	465487	
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.281	mg	1062	497	
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.94	mg	4245	1987	
Bonding wire	Other inorganic materials	1.923	mg	supplier	Bonding wire	Aluminium (Al)	7429-90-5		1.923	mg	318	149	
Encapsulation	Other inorganic materials	2797.723	mg	supplier	Molding Compound	Crystalline Silica	14808-60-7		2116.947	mg	935037	3482	
Encapsulation				supplier	Molding Compound	Epoxy Cresol Novolak	29690-82-2		357.624	mg	14975	56	
Encapsulation				supplier	Molding Compound	Phenol Resin	9003-35-4		198.681	mg	49987	186	
Encapsulation				supplier	Molding Compound	Antimony-trioxide	1309-64-4		56.766	mg	1000000	382	
Encapsulation				JIG I	Molding Compound	Brominated epoxy resin	68541-56-0		56.352	mg	756667	420037	
Encapsulation				supplier	Molding Compound	Carbon black	1333-86-4		11.353	mg	127827	70959	
connections coating	Solder	11.63	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		11.63	mg	71015	39422	