



Material declaration form

General Information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		*: Required Field

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2023-06-09
Contact name*	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact phone*	Refer to Supplier Comment section	Contact email*	Refer to Supplier Comment section
Authorized representative*	Antonella Lanzafame	Representative title	AMSMaterial 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/support.html		

Uncertainty statement

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Legal statement

Supplier acceptance* true Legal declaration* Standard

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	Manufacturing site	date
ST87M01-1000	115P*HR00BD2	A	AF1A	2023-06-09
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	432.657	mg	Each	ECOPACK® 2

Manufacturing information			
J-STD-020 MSL rating	Classification temperature	Number of reflow cycles	
3	245	3	
Bulk solder termination	Terminal plating	Terminal base alloy	Comment
Not Applicable	Tin (Sn), immersion	Copper Alloy	,

Package designator	Package size	Number of instances	Shape	
mounted board	12.8 x 10.6	43	flat	
Comment				
Comment	B0FX SMD MODULE			



QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		Response
1 - Product(s) meets EU RoHS requirement without any exemptions		TRUE
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)		false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions		false
Exemption Id.	Description	

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020		Response
1 - Product(s) meets EU ELV requirements without any exemptions		true
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)		false
Exemption Id.	Description	

QueryList : California Prop65 list, dated 27th Jan 2023			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	3.505	alloy	8101
Lead	0.001	lead on lead borate	2
Lead-Borate Glass	0.001	glass	3
Cobalt oxide	0.003	coating glass	6

QueryList : REACH-17th Jan 2023				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Diboron trioxide	1000 ppm	0.16	on glass	1989
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in embedded article / Homogeneous material (mg)	Application - article / Homogeneous material	ppm in article /Homogeneous material
Diboron trioxide	1000 ppm	0.15943	on glass	1989
3 - Packing article and materials used for shipping the Product(s) does not contain REACH Substances Of Very High Concern				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in packing article (mg)	Application - Packing article description	ppm in packing article

QueryList : Responsible metals sourcing		Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.		true
The following metals are present is the component :		Cobalt, Gold, Tin, Tungsten,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .		

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update		Response
QUERY		Response
The Product does contain at least one of the substances listed in Chemical Control Act		false

QueryList : China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020		Response
The product contains adhesives identified under GB 33372		false
Stockholm Convention Persistent Organic Pollutants		Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I		true



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mr Item Name	115P*HR00BD2		432.6577		37067678.0	1000015.0
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
U204 (STNB81195)	M-011 Other inorganic materials	12.836	mg	supplier	die	Silicon(Si)	7440-21-3		1.877	mg	146229	4338
U204 (STNB81195)				supplier	metallisation	Aluminium(Al)	7429-90-5		0.011	mg	857	25
U204 (STNB81195)				supplier	metallisation	Copper(Cu)	7440-50-8		0.054	mg	4207	125
U204 (STNB81195)				supplier	metallisation	Cobalt(Co)	7440-48-4		0.001	mg	78	2
U204 (STNB81195)				supplier	metallisation	Titanium(Ti)	7440-32-6		0.006	mg	467	14
U204 (STNB81195)				supplier	metallisation	Tungsten(W)	7440-33-7		0.006	mg	467	14
U204 (STNB81195)				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.006	mg	467	14
U204 (STNB81195)				supplier	passivation	Silicon Oxide	7631-86-9		0.068	mg	5298	157
U204 (STNB81195)				Supplier	lamine	Glass, oxide	65997-17-3		1.267	mg	98707	2928
U204 (STNB81195)				Supplier	lamine	Silicon dioxide	7631-86-9		0.631	mg	49159	1458
U204 (STNB81195)				Supplier	lamine	Bismaleimide-Triazine resin	Proprietary		0.309	mg	24073	714
U204 (STNB81195)				Supplier	lamine	Epoxy resin	Proprietary		0.215	mg	16750	497
U204 (STNB81195)				Supplier	lamine	Other substances	Proprietary		0.166	mg	12932	384
U204 (STNB81195)				Supplier	lamine	Cured Resin	Proprietary		0.186	mg	14490	430
U204 (STNB81195)				Supplier	lamine	Colorant	147-14-8		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Organic pigment	Proprietary		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Barium sulfate	7727-43-7		0.029	mg	2259	67
U204 (STNB81195)				Supplier	lamine	Talc	14807-96-6		0.037	mg	2883	86
U204 (STNB81195)				Supplier	lamine	Aluminium hydroxide	21645-51-2		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Antifoamer and Leveling agent	Proprietary		0.013	mg	1013	30
U204 (STNB81195)				Supplier	lamine	Copper	7440-50-8		2.453	mg	191103	5670
U204 (STNB81195)				Supplier	lamine	Nickel	7440-02-0		0.154	mg	11998	356
U204 (STNB81195)				Supplier	lamine	Gold	7440-57-5		0.033	mg	2571	76
U204 (STNB81195)				Supplier	Mold Compound	Epoxy Resin A	Proprietary		0.373	mg	29059	862
U204 (STNB81195)				Supplier	Mold Compound	Epoxy Resin B	Proprietary		0.124	mg	9660	287
U204 (STNB81195)				Supplier	Mold Compound	Phenol Resin A	Proprietary		0.124	mg	9660	287
U204 (STNB81195)				Supplier	Mold Compound	Silica, vitreous	60676-86-0		3.232	mg	251792	7470
U204 (STNB81195)				Supplier	Mold Compound	Silicon dioxide	7631-86-9		0.994	mg	77438	2297
U204 (STNB81195)				Supplier	Mold Compound	Metal Hydroxide	Proprietary		0.099	mg	7713	229
U204 (STNB81195)				Supplier	Mold Compound	Carbon Black	1333-86-4		0.025	mg	1948	58
U204 (STNB81195)				Supplier	Cu pillar	Copper	7440-50-8		0.105	mg	8180	243
U204 (STNB81195)				Supplier	Cu pillar	Tin	7440-31-5		0.055	mg	4285	127
U204 (STNB81195)				Supplier	Cu pillar	Silver	7440-22-4		0.001	mg	78	2
U204 (STNB81195)				Supplier	Cu pillar	Copper	7440-50-8		0.116	mg	9037	268
U204 (STNB81195)				Supplier	Cu pillar	Tin	7440-31-5		0.062	mg	4830	143
U204 (STNB81195)				Supplier	Cu pillar	Silver	7440-22-4		0.001	mg	78	2
U203 (8Y38472018)	M-011 Other inorganic materials	0.007	mg	supplier	Crystal blank	SiO2	7440-21-3		0.0005	mg	77590	1
U203 (8Y38472018)				supplier	Electrode	Cr	7440-47-3		0.0001	mg	8190	0
U203 (8Y38472018)				supplier	Electrode	Gold (Au)	7440-57-5		0.00000	mg	431	0
U203 (8Y38472018)				supplier	Base	Aluminum Oxide	1344-28-1		0.00385	mg	566881	9
U203 (8Y38472018)				supplier	Base	SiO2	7631-86-9		0.00017	mg	25215	0
U203 (8Y38472018)				supplier	Base	Cr2O3	1308-38-9		0.00004	mg	6289	0
U203 (8Y38472018)				supplier	Base	Molybdenum	7439-98-7		0.00004	mg	6289	0
U203 (8Y38472018)				supplier	kovar ring	Iron (Fe)	7439-89-6		0.00005	mg	7337	0
U203 (8Y38472018)				supplier	kovar ring	Nickel (Ni)	7440-02-0		0.00003	mg	4015	0
U203 (8Y38472018)				supplier	kovar ring	Cobalt (Co)	7440-48-4		0.00002	mg	2492	0
U203 (8Y38472018)				supplier	plate	Gold	7440-50-8		0.00003	mg	3945	0
U203 (8Y38472018)				supplier	plate	Nickel (Ni)	7440-02-0		0.00011	mg	16820	0
U203 (8Y38472018)				supplier	Metallizing	W	7440-33-7		0.00005	mg	6922	0
U203 (8Y38472018)				supplier	Solder	Ag	7440-22-4		0.00010	mg	14743	0
U203 (8Y38472018)				supplier	Solder	Cu	7440-50-8		0.00004	mg	6022	0
U203 (8Y38472018)				supplier	Base Material	Fe	7439-89-6		0.00077	mg	113364	2
U203 (8Y38472018)				supplier	Base Material	Ni	7440-02-0		0.00042	mg	61919	1
U203 (8Y38472018)				supplier	Base Material	Co	7440-48-4		0.00025	mg	36093	1
U203 (8Y38472018)				supplier	Base Material	Mn	7439-96-5		0.00001	mg	915	0
U203 (8Y38472018)				supplier	Base Material	C	7440-44-0		0.00000	mg	21	0
U203 (8Y38472018)				supplier	Base Material	Si	7440-21-3		0.00000	mg	149	0
U203 (8Y38472018)				supplier	Base Material	Cr	7440-47-3		0.00000	mg	100	0
U203 (8Y38472018)				supplier	Base Material	Ni	7440-02-0		0.000	mg	19535	0

U203 (8Y38472018)				supplier	Silver adhesive	Ag	7440-22-4		0.000	mg	10309	0
U203 (8Y38472018)				supplier	Silver adhesive	SiO2	631-86-9		0.000	mg	736	0
U203 (8Y38472018)				supplier	Silver adhesive	Silicone resin	Proprietary		0.000	mg	3682	0
U201 (ST8700)	M-011 Other inorganic materials	20.534	mg	supplier	Silicon	Silicon	7440-21-3		12.865	mg	626530	29735
U201 (ST8700)				supplier	Coating film	Silica	Proprietary		0.430	mg	20929	993
U201 (ST8700)				supplier	Coating film	Epoxy resin	Proprietary		0.159	mg	7766	369
U201 (ST8700)				supplier	Coating film	Acrylic resin	Proprietary		0.159	mg	7766	369
U201 (ST8700)				supplier	Solder ball	Tin	7440-31-5		4.005	mg	195056	9257
U201 (ST8700)				supplier	Solder ball	Silver	7440-22-4		0.168	mg	8170	388
U201 (ST8700)				supplier	Solder ball	Copper	7440-50-8		0.021	mg	1021	48
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Gamma-Butyrolactone	96-48-0		0.150	mg	7307	347
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Polyamic acid ester	Proprietary		0.117	mg	5683	270
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Dimethyl sulfoxide	67-68-5		0.043	mg	2111	100
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Tetraethylene glycol dimethacrylate	Proprietary		0.017	mg	812	39
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Trialkoxylated amidocarboxylic silane	Proprietary		0.003	mg	162	8
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Oxime derivative	Proprietary		0.003	mg	162	8
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Titanium	7440-32-6		0.008	mg	400	19
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Copper	7440-50-8		0.032	mg	1574	75
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Titanium	7440-32-6		0.008	mg	400	19
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Copper	7440-50-8		0.032	mg	1574	75
U201 (ST8700)				supplier	RDL Copper	Copper	7440-50-8		0.970	mg	47234	2242
U201 (ST8700)				supplier	UBM Copper	Copper	7440-50-8		1.342	mg	65341	3101
PCB		0.500	mg	supplier	PWB Base Material_copper foil	Copper (Cu)	7440-50-8		0.149	mg	297200	343
PCB				supplier	PWB Base Material_laminate	Epoxy resin	26265-08-7		0.142	mg	284600	329
PCB				supplier	PWB Base Material_laminate	Fiber glass	65997-17-3		0.160	mg	320600	371
PCB				supplier	PWB Solder Resist	Barium Sulfate	7727-43-7		0.024	mg	47200	55
PCB				supplier	PWB Solder Resist	Epoxy and acrylate resin	Proprietary		0.024	mg	47200	55
PCB				supplier	Immersion Gold	GOLD (Au)	7440-57-5		0.001	mg	1000	1
PCB				supplier	Electroless Nickel	Nickel (Ni)	7440-02-0		0.001	mg	2200	3
Capacitor C201 (GRM0225C0J101JA02)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.027	mg	300000	62
Capacitor C201 (GRM0225C0J101JA02)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6667	1
Capacitor C201 (GRM0225C0J101JA02)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	26667	6
Capacitor C201 (GRM0225C0J101JA02)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C201 (GRM0225C0J101JA02)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C201 (GRM0225C0J101JA02)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Zirconium oxide	1314-23-4		0.024	mg	266667	55
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Calcium oxide	1305-78-8		0.019	mg	213333	44
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Misc	Proprietary		0.005	mg	53333	11
Capacitor C202 (GRM022R61A103KE19)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.026	mg	290000	60
Capacitor C202 (GRM022R61A103KE19)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6444	1
Capacitor C202 (GRM022R61A103KE19)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	25778	5
Capacitor C202 (GRM022R61A103KE19)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C202 (GRM022R61A103KE19)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C202 (GRM022R61A103KE19)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.029	mg	326667	68
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Titanium dioxide	13463-67-7		0.015	mg	163333	34
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Misc	Proprietary		0.005	mg	54444	11
Capacitor C203 (GRM0225C1H100JA03)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.027	mg	300000	62
Capacitor C203 (GRM0225C1H100JA03)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6667	1
Capacitor C203 (GRM0225C1H100JA03)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	26667	6
Capacitor C203 (GRM0225C1H100JA03)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C203 (GRM0225C1H100JA03)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C203 (GRM0225C1H100JA03)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Zirconium oxide	1314-23-4		0.024	mg	266667	55
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Calcium oxide	1305-78-8		0.019	mg	213333	44
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Misc	Proprietary		0.005	mg	53333	11
Capacitor C206 (GRM033R60J474ME90)	M-011 Other inorganic materials	0.330	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.068	mg	207273	158
Capacitor C206 (GRM033R60J474ME90)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.002	mg	4606	4
Capacitor C206 (GRM033R60J474ME90)				supplier	Glass	Silicon dioxide	7631-86-9		0.006	mg	18424	14
Capacitor C206 (GRM033R60J474ME90)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.007	mg	21212	16
Capacitor C206 (GRM033R60J474ME90)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.008	mg	24242	18



Capacitor C206 (GRM033R60J474ME90)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.019	mg	57576	44
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.132	mg	400000	305
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.066	mg	200000	153
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Misc	Proprietary		0.022	mg	66667	51
Capacitor C207 (GRM033R60J224ME15) M-011 Other inorganic materials	0.330	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.068	mg	207273	158
Capacitor C207 (GRM033R60J224ME15)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.002	mg	4606	4
Capacitor C207 (GRM033R60J224ME15)			supplier	Glass	Silicon dioxide	7631-86-9		0.006	mg	18424	14
Capacitor C207 (GRM033R60J224ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.007	mg	21212	16
Capacitor C207 (GRM033R60J224ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.008	mg	24242	18
Capacitor C207 (GRM033R60J224ME15)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.019	mg	57576	44
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.132	mg	400000	305
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.066	mg	200000	153
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Misc	Proprietary		0.022	mg	66667	51
Capacitor C209.C212 (GRM022R60J103) M-011 Other inorganic materials	0.180	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.052	mg	290000	121
Capacitor C209.C212 (GRM022R60J103ME19)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.001	mg	6444	3
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Glass	Silicon dioxide	7631-86-9		0.005	mg	25778	11
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.006	mg	33333	14
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.004	mg	22222	9
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.014	mg	77778	32
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.059	mg	326667	136
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.029	mg	163333	68
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Misc	Proprietary		0.010	mg	54444	23
Capacitor C213 (GRM022R60J473ME15) M-011 Other inorganic materials	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.026	mg	290000	60
Capacitor C213 (GRM022R60J473ME15)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.001	mg	6444	1
Capacitor C213 (GRM022R60J473ME15)			supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	25778	5
Capacitor C213 (GRM022R60J473ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C213 (GRM022R60J473ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C213 (GRM022R60J473ME15)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.029	mg	326667	68
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.015	mg	163333	34
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Misc	Proprietary		0.005	mg	54444	11
Capacitor C214.C223 (GRM033C81A105) M-011 Other inorganic materials	0.660	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.137	mg	207273	316
Capacitor C214.C223 (GRM033C81A105ME05)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.003	mg	4606	7
Capacitor C214.C223 (GRM033C81A105ME05)			supplier	Glass	Silicon dioxide	7631-86-9		0.012	mg	18424	28

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mr Item Name	115P*HR00BD2		432.6577		37067678.0	1000015.0
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
U204 (STNB81195)	M-011 Other inorganic materials	12.836	mg	supplier	die	Silicon(Si)	7440-21-3		1.877	mg	146229	4338
U204 (STNB81195)				supplier	metallisation	Aluminium(Al)	7429-90-5		0.011	mg	857	25
U204 (STNB81195)				supplier	metallisation	Copper(Cu)	7440-50-8		0.054	mg	4207	125
U204 (STNB81195)				supplier	metallisation	Cobalt(Co)	7440-48-4		0.001	mg	78	2
U204 (STNB81195)				supplier	metallisation	Titanium(Ti)	7440-32-6		0.006	mg	467	14
U204 (STNB81195)				supplier	metallisation	Tungsten(W)	7440-33-7		0.006	mg	467	14
U204 (STNB81195)				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.006	mg	467	14
U204 (STNB81195)				supplier	passivation	Silicon Oxide	7631-86-9		0.068	mg	5298	157
U204 (STNB81195)				Supplier	lamine	Glass, oxide	65997-17-3		1.267	mg	98707	2928
U204 (STNB81195)				Supplier	lamine	Silicon dioxide	7631-86-9		0.631	mg	49159	1458
U204 (STNB81195)				Supplier	lamine	Bismaleimide-Triazine resin	Proprietary		0.309	mg	24073	714
U204 (STNB81195)				Supplier	lamine	Epoxy resin	Proprietary		0.215	mg	16750	497
U204 (STNB81195)				Supplier	lamine	Other substances	Proprietary		0.166	mg	12932	384
U204 (STNB81195)				Supplier	lamine	Cured Resin	Proprietary		0.186	mg	14490	430
U204 (STNB81195)				Supplier	lamine	Colorant	147-14-8		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Organic pigment	Proprietary		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Barium sulfate	7727-43-7		0.029	mg	2259	67
U204 (STNB81195)				Supplier	lamine	Talc	14807-96-6		0.037	mg	2883	86
U204 (STNB81195)				Supplier	lamine	Aluminium hydroxide	21645-51-2		0.001	mg	78	2
U204 (STNB81195)				Supplier	lamine	Antifoamer and Leveling agent	Proprietary		0.013	mg	1013	30
U204 (STNB81195)				Supplier	lamine	Copper	7440-50-8		2.453	mg	191103	5670
U204 (STNB81195)				Supplier	lamine	Nickel	7440-02-0		0.154	mg	11998	356
U204 (STNB81195)				Supplier	lamine	Gold	7440-57-5		0.033	mg	2571	76
U204 (STNB81195)				Supplier	Mold Compound	Epoxy Resin A	Proprietary		0.373	mg	29059	862
U204 (STNB81195)				Supplier	Mold Compound	Epoxy Resin B	Proprietary		0.124	mg	9660	287
U204 (STNB81195)				Supplier	Mold Compound	Phenol Resin A	Proprietary		0.124	mg	9660	287
U204 (STNB81195)				Supplier	Mold Compound	Silica, vitreous	60676-86-0		3.232	mg	251792	7470
U204 (STNB81195)				Supplier	Mold Compound	Silicon dioxide	7631-86-9		0.994	mg	77438	2297
U204 (STNB81195)				Supplier	Mold Compound	Metal Hydroxide	Proprietary		0.099	mg	7713	229
U204 (STNB81195)				Supplier	Mold Compound	Carbon Black	1333-86-4		0.025	mg	1948	58
U204 (STNB81195)				Supplier	Cu pillar	Copper	7440-50-8		0.105	mg	8180	243
U204 (STNB81195)				Supplier	Cu pillar	Tin	7440-31-5		0.055	mg	4285	127
U204 (STNB81195)				Supplier	Cu pillar	Silver	7440-22-4		0.001	mg	78	2
U204 (STNB81195)				Supplier	Cu pillar	Copper	7440-50-8		0.116	mg	9037	268
U204 (STNB81195)				Supplier	Cu pillar	Tin	7440-31-5		0.062	mg	4830	143
U204 (STNB81195)				Supplier	Cu pillar	Silver	7440-22-4		0.001	mg	78	2
U203 (8Y38472018)	M-011 Other inorganic materials	0.007	mg	supplier	Crystal blank	SiO2	7440-21-3		0.0005	mg	77590	1
U203 (8Y38472018)				supplier	Electrode	Cr	7440-47-3		0.0001	mg	8190	0
U203 (8Y38472018)				supplier	Electrode	Gold (Au)	7440-57-5		0.00000	mg	431	0
U203 (8Y38472018)				supplier	Base	Aluminum Oxide	1344-28-1		0.00385	mg	566881	9
U203 (8Y38472018)				supplier	Base	SiO2	7631-86-9		0.00017	mg	25215	0
U203 (8Y38472018)				supplier	Base	Cr2O3	1308-38-9		0.00004	mg	6289	0
U203 (8Y38472018)				supplier	Base	Molybdenum	7439-98-7		0.00004	mg	6289	0
U203 (8Y38472018)				supplier	kovar ring	Iron (Fe)	7439-89-6		0.00005	mg	7337	0
U203 (8Y38472018)				supplier	kovar ring	Nickel (Ni)	7440-02-0		0.00003	mg	4015	0
U203 (8Y38472018)				supplier	kovar ring	Cobalt (Co)	7440-48-4		0.00002	mg	2492	0
U203 (8Y38472018)				supplier	plate	Gold	7440-50-8		0.00003	mg	3945	0
U203 (8Y38472018)				supplier	plate	Nickel (Ni)	7440-02-0		0.00011	mg	16820	0
U203 (8Y38472018)				supplier	Metallizing	W	7440-33-7		0.00005	mg	6922	0
U203 (8Y38472018)				supplier	Solder	Ag	7440-22-4		0.00010	mg	14743	0
U203 (8Y38472018)				supplier	Solder	Cu	7440-50-8		0.00004	mg	6022	0
U203 (8Y38472018)				supplier	Base Material	Fe	7439-89-6		0.00077	mg	113364	2
U203 (8Y38472018)				supplier	Base Material	Ni	7440-02-0		0.00042	mg	61919	1
U203 (8Y38472018)				supplier	Base Material	Co	7440-48-4		0.00025	mg	36093	1
U203 (8Y38472018)				supplier	Base Material	Mn	7439-96-5		0.00001	mg	915	0
U203 (8Y38472018)				supplier	Base Material	C	7440-44-0		0.00000	mg	21	0
U203 (8Y38472018)				supplier	Base Material	Si	7440-21-3		0.00000	mg	149	0
U203 (8Y38472018)				supplier	Base Material	Cr	7440-47-3		0.00000	mg	100	0
U203 (8Y38472018)				supplier	Base Material	Ni	7440-02-0		0.000	mg	19535	0



U203 (8Y38472018)				supplier	Silver adhesive	Ag	7440-22-4		0.000	mg	10309	0
U203 (8Y38472018)				supplier	Silver adhesive	SiO2	631-86-9		0.000	mg	736	0
U203 (8Y38472018)				supplier	Silver adhesive	Silicone resin	Proprietary		0.000	mg	3682	0
U201 (ST8700)	M-011 Other inorganic materials	20.534	mg	supplier	Silicon	Silicon	7440-21-3		12.865	mg	626530	29735
U201 (ST8700)				supplier	Coating film	Silica	Proprietary		0.430	mg	20929	993
U201 (ST8700)				supplier	Coating film	Epoxy resin	Proprietary		0.159	mg	7766	369
U201 (ST8700)				supplier	Coating film	Acrylic resin	Proprietary		0.159	mg	7766	369
U201 (ST8700)				supplier	Solder ball	Tin	7440-31-5		4.005	mg	195056	9257
U201 (ST8700)				supplier	Solder ball	Silver	7440-22-4		0.168	mg	8170	388
U201 (ST8700)				supplier	Solder ball	Copper	7440-50-8		0.021	mg	1021	48
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Gamma-Butyrolactone	96-48-0		0.150	mg	7307	347
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Polyamic acid ester	Proprietary		0.117	mg	5683	270
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Dimethyl sulfoxide	67-68-5		0.043	mg	2111	100
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Tetraethylene glycol dimethacrylate	Proprietary		0.017	mg	812	39
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Trialkoxylated amidocarboxylic silane	Proprietary		0.003	mg	162	8
U201 (ST8700)				supplier	Repassivation polymer(LTC9320)	Oxime derivative	Proprietary		0.003	mg	162	8
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Titanium	7440-32-6		0.008	mg	400	19
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Copper	7440-50-8		0.032	mg	1574	75
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Titanium	7440-32-6		0.008	mg	400	19
U201 (ST8700)				supplier	Runner/UBM (Metal Sputter)	Copper	7440-50-8		0.032	mg	1574	75
U201 (ST8700)				supplier	RDL Copper	Copper	7440-50-8		0.970	mg	47234	2242
U201 (ST8700)				supplier	UBM Copper	Copper	7440-50-8		1.342	mg	65341	3101
PCB		0.500	mg	supplier	PWB Base Material_copper foil	Copper (Cu)	7440-50-8		0.149	mg	297200	343
PCB				supplier	PWB Base Material_laminate	Epoxy resin	26265-08-7		0.142	mg	284600	329
PCB				supplier	PWB Base Material_laminate	Fiber glass	65997-17-3		0.160	mg	320600	371
PCB				supplier	PWB Solder Resist	Barium Sulfate	7727-43-7		0.024	mg	47200	55
PCB				supplier	PWB Solder Resist	Epoxy and acrylate resin	Proprietary		0.024	mg	47200	55
PCB				supplier	Immersion Gold	GOLD (Au)	7440-57-5		0.001	mg	1000	1
PCB				supplier	Electroless Nickel	Nickel (Ni)	7440-02-0		0.001	mg	2200	3
Capacitor C201 (GRM0225C0J101JA02)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.027	mg	300000	62
Capacitor C201 (GRM0225C0J101JA02)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6667	1
Capacitor C201 (GRM0225C0J101JA02)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	26667	6
Capacitor C201 (GRM0225C0J101JA02)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C201 (GRM0225C0J101JA02)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C201 (GRM0225C0J101JA02)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Zirconium oxide	1314-23-4		0.024	mg	266667	55
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Calcium oxide	1305-78-8		0.019	mg	213333	44
Capacitor C201 (GRM0225C0J101JA02)				supplier	Ceramic	Misc	Proprietary		0.005	mg	53333	11
Capacitor C202 (GRM022R61A103KE19)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.026	mg	290000	60
Capacitor C202 (GRM022R61A103KE19)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6444	1
Capacitor C202 (GRM022R61A103KE19)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	25778	5
Capacitor C202 (GRM022R61A103KE19)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C202 (GRM022R61A103KE19)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C202 (GRM022R61A103KE19)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.029	mg	326667	68
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Titanium dioxide	13463-67-7		0.015	mg	163333	34
Capacitor C202 (GRM022R61A103KE19)				supplier	Ceramic	Misc	Proprietary		0.005	mg	54444	11
Capacitor C203 (GRM0225C1H100JA03)	M-010 Ceramics / glass	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.027	mg	300000	62
Capacitor C203 (GRM0225C1H100JA03)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.001	mg	6667	1
Capacitor C203 (GRM0225C1H100JA03)				supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	26667	6
Capacitor C203 (GRM0225C1H100JA03)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C203 (GRM0225C1H100JA03)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C203 (GRM0225C1H100JA03)				supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Zirconium oxide	1314-23-4		0.024	mg	266667	55
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Calcium oxide	1305-78-8		0.019	mg	213333	44
Capacitor C203 (GRM0225C1H100JA03)				supplier	Ceramic	Misc	Proprietary		0.005	mg	53333	11
Capacitor C206 (GRM033R60J474ME90)	M-011 Other inorganic materials	0.330	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.068	mg	207273	158
Capacitor C206 (GRM033R60J474ME90)				SVHC	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.002	mg	4606	4
Capacitor C206 (GRM033R60J474ME90)				supplier	Glass	Silicon dioxide	7631-86-9		0.006	mg	18424	14
Capacitor C206 (GRM033R60J474ME90)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.007	mg	21212	16
Capacitor C206 (GRM033R60J474ME90)				supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.008	mg	24242	18



Capacitor C206 (GRM033R60J474ME90)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.019	mg	57576	44
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.132	mg	400000	305
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.066	mg	200000	153
Capacitor C206 (GRM033R60J474ME90)			supplier	Ceramic	Misc	Proprietary		0.022	mg	66667	51
Capacitor C207 (GRM033R60J224ME15) M-011 Other inorganic materials	0.330	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.068	mg	207273	158
Capacitor C207 (GRM033R60J224ME15)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.002	mg	4606	4
Capacitor C207 (GRM033R60J224ME15)			supplier	Glass	Silicon dioxide	7631-86-9		0.006	mg	18424	14
Capacitor C207 (GRM033R60J224ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.007	mg	21212	16
Capacitor C207 (GRM033R60J224ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.008	mg	24242	18
Capacitor C207 (GRM033R60J224ME15)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.019	mg	57576	44
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.132	mg	400000	305
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.066	mg	200000	153
Capacitor C207 (GRM033R60J224ME15)			supplier	Ceramic	Misc	Proprietary		0.022	mg	66667	51
Capacitor C209.C212 (GRM022R60J103) M-011 Other inorganic materials	0.180	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.052	mg	290000	121
Capacitor C209.C212 (GRM022R60J103ME19)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.001	mg	6444	3
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Glass	Silicon dioxide	7631-86-9		0.005	mg	25778	11
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.006	mg	33333	14
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.004	mg	22222	9
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.014	mg	77778	32
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.059	mg	326667	136
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.029	mg	163333	68
Capacitor C209.C212 (GRM022R60J103ME19)			supplier	Ceramic	Misc	Proprietary		0.010	mg	54444	23
Capacitor C213 (GRM022R60J473ME15) M-011 Other inorganic materials	0.090	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.026	mg	290000	60
Capacitor C213 (GRM022R60J473ME15)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.001	mg	6444	1
Capacitor C213 (GRM022R60J473ME15)			supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	25778	5
Capacitor C213 (GRM022R60J473ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.003	mg	33333	7
Capacitor C213 (GRM022R60J473ME15)			supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.002	mg	22222	5
Capacitor C213 (GRM022R60J473ME15)			supplier	Tin plating	Tin (Sn)	7440-31-5		0.007	mg	77778	16
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.029	mg	326667	68
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Titanium dioxide	13463-67-7		0.015	mg	163333	34
Capacitor C213 (GRM022R60J473ME15)			supplier	Ceramic	Misc	Proprietary		0.005	mg	54444	11
Capacitor C214.C223 (GRM033C81A105) M-011 Other inorganic materials	0.660	mg	supplier	Copper alloys	Copper (Cu)	7440-50-8		0.137	mg	207273	316
Capacitor C214.C223 (GRM033C81A105ME05)			SVHC	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.003	mg	4606	7
Capacitor C214.C223 (GRM033C81A105ME05)			supplier	Glass	Silicon dioxide	7631-86-9		0.012	mg	18424	28