



Materials Declaration Form

IPC	1752	Version	2
Form Type *	Distribute		
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-04-20
Company Unique ID	NL 008751171B01		
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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/support.html		

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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
	HB5P*HW00AAA	A	996G	2020-04-20
Amount	UoM	Unit type	ST ECOPACK Grade	
600	mg	Each	ECOPACK® 2	
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
Not Applicable	Not Applicable	3		 life.augmented
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0	

Package Designator	Size	Nbr of instances	Shape	
QFN	11.5 x 13.5	23	flat	
Comment	B0AP BLUENRG-2 MODULE QFN, CHIP ANT; MDF is valid for BLUENRG-M2SA			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption id.	Description
7c-1	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption id.	Description
10a	Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d)

QueryList : California Prop65 list, dated 3rd January 2020			
Query			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	36.41	many	60683

QueryList : REACH-16th January 2020				
Query				Response
1 - Product(s) 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
,	0			
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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
,	0		,	

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query				Response
The Product does contain at least one of the substances listed in Chemical Control Act				NO
Substance	Homogeneous Material impacted	Content in Homogeneous Material (mg)	Concentration in the material(%)	Application Purpose

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HBSPP*HW00AAA				ppm/A	996164.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
FLI (I.C. BALUN FILTER)	Other inorganic materials	3.200	mg	Supplier	Silicon Die	Silicon	7440-21-3		3.200	mg	1000000	5333
U1 (BlueNRG-2)	Other inorganic materials	88.890	mg	Supplier	Silicon Die	Silicon	7440-21-3		88.890	mg	27778125	148150
PCB	Other Organic Materials	248.400	mg	Supplier	PWB Base Material_laminate	Epoxy resin	26265-08-7		75.205	mg	23501709	125342
PCB				Supplier	PWB Base Material_laminate	Fiber glass	65997-17-3		71.446	mg	22326848	119077
PCB				Supplier	PWB Base Material_laminate	misc.	Proprietary		3.760	mg	1175097	6267
PCB				Supplier	PWB Base Material_copper foil	Copper (Cu)	7440-50-8		42.377	mg	13242924	70629
PCB				Supplier	PWB Base Material_copper foil	Zinc (Zn)	7440-66-6		0.021	mg	6629	35
PCB				Supplier	PWB Base Material_copper foil	Arsenic (As)	7440-38-2		0.021	mg	6629	35
PCB				Supplier	PWB Base Material_copper foil	CHROMIUM (Cr)	7440-47-3		0.002	mg	663	4
PCB				Supplier	PWB Base Material_copper foil	Nickel (Ni)	7740-02-0		0.002	mg	663	4
PCB				Supplier	PWB Solder Resist	misc.	Proprietary		12.862	mg	4019358	21437
PCB				Supplier	PWB Solder Resist	Barium Sulfate	7727-43-7		7.054	mg	2204401	11757
PCB				Supplier	PWB Solder Resist	Talc	14807-96-6		2.351	mg	734800	3919
PCB				Supplier	PWB Solder Resist	Silica	7631-86-9		1.246	mg	389444	2077
PCB				Supplier	Plated copper	Copper (Cu)	7440-50-8		31.055	mg	9704831	51759
PCB				Supplier	Plated copper	Carbon (C)	7440-44-0		0.140	mg	43891	234
PCB				Supplier	Plated copper	Nickel (Ni)	7440-02-0		0.016	mg	4877	26
PCB				Supplier	Electroless Nickel	Lead (Pb)	7439-92-1	7c-1-Electrical and electronic co	0.0009	mg	79	0
PCB				Supplier	Electroless Nickel	Phosphorus (P)	7723-14-0		0.039	mg	12247	65
PCB				Supplier	Electroless Nickel	Nickel (Ni)	7440-02-0		0.520	mg	162487	867
PCB				Supplier	Immersion Gold	GOLD (Au)	7440-57-5		0.279	mg	87236	465
METAL LID	Copper & its alloys	198.000	mg	Supplier	Nickel silver	Copper (Cu)	7440-50-8		126.878	mg	39649500	211464
METAL LID				Supplier	Nickel silver	Nickel (Ni)	7440-02-0		33.660	mg	10518750	56100
METAL LID				Supplier	Nickel silver	Zinc (Zn)	7440-66-6		37.272	mg	11647350	62119
METAL LID				Supplier	Nickel silver	Manganese (Mn)	7439-96-5		0.190	mg	59400	317
SOLDER PASTE W5698CPS 955n55b	Solder	15.159	mg	Supplier	Metal	Tin (Sn)	7440-31-5		12.632	mg	3947630	21054
SOLDER PASTE W5698CPS 955n55b				Supplier	Metal	Antimony	7440-36-0		0.657	mg	205277	1095
SOLDER PASTE W5698CPS 955n55b				Supplier	Metal	Amine	Proprietary		0.616	mg	192581	1027
SOLDER PASTE W5698CPS 955n55b				Supplier	Flux	Glycol	Proprietary		0.606	mg	189486	1011
SOLDER PASTE W5698CPS 955n55b				Supplier	Flux	Polyalkylene glycol	Proprietary		0.606	mg	189486	1011
SOLDER PASTE W5698CPS 955n55b				Supplier	Flux	Rosin/Resin	Proprietary		0.020	mg	6316	34
SOLDER PASTE W5698CPS 955n55b				Supplier	Flux	Alcohol	Proprietary		0.020	mg	6316	34
SOLDER PASTE Indalloy 133 with Indium 8.9HF	Solder	4.500	mg	Supplier	Metal	Tin (Sn)	7440-31-5		3.591	mg	1122188	5985
SOLDER PASTE Indalloy 133 with Indium 8.9HF				Supplier	Metal	antimony	7440-36-0		0.189	mg	59063	315
SOLDER PASTE Indalloy 133 with Indium 8.9HF				Supplier	Flux	rosin	65997-05-9		0.270	mg	84375	450
SOLDER PASTE Indalloy 133 with Indium 8.9HF				Supplier	Flux	polyglycol ether	9038-95-3		0.225	mg	70313	375
SOLDER PASTE Indalloy 133 with Indium 8.9HF				Supplier	Flux	carboxylic acid	68937-72-4		0.225	mg	70313	375
INDUCTOR L3 (LQP03TN3N9B02D)	Other Nonferrous metals & alloys	0.175	mg	Supplier	Other special metals	Silver (Ag)	7440-22-4		0.016	mg	4969	27
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Other special metals	Silver (Ag)	7440-22-4		0.024	mg	7594	41
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	759	4
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Nickel plating	Nickel (Ni)	7440-02-0		0.008	mg	2406	13
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Tin plating	Tin (Sn)	7440-31-5		0.009	mg	2938	16
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Glass	Silica	7631-86-9		0.055	mg	17109	91
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Glass	Aluminium Oxide	1344-28-1		0.044	mg	13688	73
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.011	mg	3422	18
INDUCTOR L3 (LQP03TN3N9B02D)				Supplier	Glass	Silica	7631-86-9		0.004	mg	1197	6
INDUCTOR L4 (LQP03TN2N0B02D)	Other Nonferrous metals & alloys	0.175	mg	Supplier	Other special metals	Silver (Ag)	7440-22-4		0.016	mg	4969	27
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Other special metals	Silver (Ag)	7440-22-4		0.024	mg	7594	41
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.002	mg	759	4
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Nickel plating	Nickel	7440-02-0		0.008	mg	2406	13
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Tin plating	Tin	7440-31-5		0.009	mg	2938	16
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Glass	Silica	7631-86-9		0.055	mg	17109	91
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Glass	Aluminium Oxide	1344-28-1		0.044	mg	13688	73
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Glass	Diboron trioxide, Boric oxide	1303-86-2		0.011	mg	3422	18
INDUCTOR L4 (LQP03TN2N0B02D)				Supplier	Glass	Silica	7631-86-9		0.004	mg	1197	6
INDUCTOR X2 (LQP15MN1NSW02D)	Ceramics / Glass	0.630	mg	Supplier	Glass	Aluminium Oxide	1344-28-1		0.317	mg	99091	528
INDUCTOR X2 (LQP15MN1NSW02D)				Supplier	Glass	Cristobalite	14464-46-1		0.010	mg	3097	17
INDUCTOR X2 (LQP15MN1NSW02D)				Supplier	Glass	Misc	Proprietary		0.003	mg	1031	6
INDUCTOR X2 (LQP15MN1NSW02D)				Supplier	Other special metals	Silver (Ag)	7440-22-4		0.052	mg	16250	87

INDUCTOR X2 (LQP15MN1N5W02D)				Supplier	Nickel and Nickel alloys	Copper (Cu)	7440-50-8		0.000	mg	136	0
INDUCTOR X2 (LQP15MN1N5W02D)				Supplier	Nickel plating	Nickel	7440-02-0		0.011	mg	8409	19
INDUCTOR X2 (LQP15MN1N5W02D)				Supplier	Tin plating	Tin	7440-31-5		0.015	mg	11061	24
INDUCTOR X2 (LQP15MN1N5W02D)				Supplier	Others (Cured resin or duromers)	Polyimide	25036-53-7		0.220	mg	#N/A	367
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)	Ceramics / Glass	0.660	mg	Supplier	Ceramic	Zirconium oxide	1314-23-4		0.214	mg	#N/A	357
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Ceramic	Calcium oxide	1305-78-8		0.171	mg	#N/A	285
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Ceramic	Misc	Proprietary		0.043	mg	32424	71
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Nickel and Nickel alloys	Nickel	7440-02-0		0.018	mg	13636	30
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Copper alloys	Copper (Cu)	7440-50-8		0.144	mg	109091	240
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.013	mg	9697	21
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.003	mg	2424	5
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Nickel plating	Nickel	7440-02-0		0.014	mg	10606	23
CAPACITOR C1 & C2 (GRM0335C1H220IA01D)				Supplier	Tin plating	Tin	7440-31-5		0.040	mg	30303	67
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)	Ceramics / Glass	0.660	mg	Supplier	Ceramic	Zirconium oxide	1314-23-4		0.214	mg	#N/A	357
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Ceramic	Calcium oxide	1305-78-8		0.171	mg	#N/A	285
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Ceramic	Misc	Proprietary		0.043	mg	32424	71
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Nickel and Nickel alloys	Nickel	7440-02-0		0.018	mg	13636	30
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Copper alloys	Copper (Cu)	7440-50-8		0.144	mg	109091	240
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.013	mg	9697	21
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.003	mg	2424	5
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Nickel plating	Nickel	7440-02-0		0.014	mg	10606	23
CAPACITOR C4 & C5 (GRM0335C1H120GA01D)				Supplier	Tin plating	Tin (Sn)	7440-31-5		0.040	mg	30303	67
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)	Ceramics / Glass	1.320	mg	Supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.528	mg	40000	880
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Ceramic	Titanium dioxide	13463-67-7		0.264	mg	20000	440
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Ceramic	Misc	Proprietary		0.088	mg	66667	147
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.032	mg	24000	120
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Copper alloys	Copper (Cu)	7440-50-8		0.274	mg	23333	12
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.024	mg	40000	20
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.006	mg	13976	129
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Nickel plating	Nickel (Ni)	7440-02-0		0.028	mg	43	0
CAPACITOR C3, C7, C9 & C14 (GRM033R60I104KE19D)				Supplier	Tin plating	Tin (Sn)	7440-31-5		0.076	mg	111116	1026
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)	Ceramics / Glass	1.320	mg	Supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.528	mg	1083	10
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Ceramic	Titanium dioxide	13463-67-7		0.264	mg	65005	600
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Ceramic	Misc	Proprietary		0.088	mg	433	4
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Nickel and Nickel alloys	Nickel (Ni)	7440-02-0		0.032	mg	39003	360
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Copper alloys	Copper (Cu)	7440-50-8		0.274	mg	28891	267
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.024	mg	1806	17
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.006	mg	1806	17
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Nickel plating	Nickel (Ni)	7440-02-0		0.028	mg	12640	117
CAPACITOR C6, C8, C10 & C13 (GRM033R60I105ME A2D)				Supplier	Tin plating	Tin (Sn)	7440-31-5		0.076	mg	355724	3283
CAPACITOR C15 (GRM033R71E101KA01D)	Ceramics / Glass	0.330	mg	Supplier	Ceramic	Barium oxide, obtained by calcining witherite	1304-28-5		0.132	mg	12640	117
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Ceramic	Titanium dioxide	13463-67-7		0.066	mg	102925	950
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Ceramic	Misc	Proprietary		0.022	mg	23474	217
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Nickel and Nickel alloys	Nickel	7440-02-0		0.008	mg	5417	50
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Copper alloys	Copper (Cu)	7440-50-8		0.068	mg	0	0
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Glass	Silicon dioxide	7631-86-9		0.006	mg	7223	67
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Glass	Diboron trioxide; Boric oxide	1303-86-2		0.002	mg	63200	583
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Nickel plating	Nickel (Ni)	7440-02-0		0.007	mg	34308	317
CAPACITOR C15 (GRM033R71E101KA01D)				Supplier	Tin plating	Tin (Sn)	7440-31-5		0.019	mg	19863	183
CAPACITOR C16 (C0603X6S0154KT00NE)	Ceramics / Glass	0.300	mg	Supplier	Base material	Ceramic	66402-68-4		0.160	mg	50560	467
CAPACITOR C16 (C0603X6S0154KT00NE)				Supplier	Base material	Nickel (Ni)	7440-02-0		0.049	mg	9029	83
CAPACITOR C16 (C0603X6S0154KT00NE)				Supplier	Base material	Copper (Cu)	7440-50-8		0.072	mg	3611	33
CAPACITOR C16 (C0603X6S0154KT00NE)				Supplier	Plating	Nickel (Ni)	7440-02-0		0.007	mg	108	1
CAPACITOR C16 (C0603X6S0154KT00NE)				Supplier	Plating	Tin (Sn)	7440-31-5		0.012	mg	31419	290
CRYSTAL Y1 (NX20125A)	Ceramics / Glass	5.538	mg	Supplier	Blank	SILICON DIOXIDE	14808-60-7		0.077	mg	4695	43
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	CARBONBLACK	1333-86-4		0.000	mg	47385	472
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	IRON (Fe)	7439-89-6		0.615	mg	97352	969
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	Manganese (Mn)	7439-96-5		0.006	mg	784	8
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	Nickel (Ni)	7440-02-0		0.360	mg	53126	529
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	SILICON	7440-21-3		0.002	mg	128	1
CRYSTAL Y1 (NX20125A)				Supplier	Cover kovar	COBALT (Co)	7440-48-4		0.216	mg	18	0

CRYSTAL Y1 (NX20125A)				Supplier	Cover plating	Nickel (Ni)	7440-02-0		0.160	mg	30967	308
CRYSTAL Y1 (NX20125A)				Supplier	Base ceramic	MAGNESIUMOXIDE	1309-48-4		0.010	mg	28597	285
CRYSTAL Y1 (NX20125A)				Supplier	Base ceramic	MOLYBDENUMTRIOXIDE	1313-27-5		0.010	mg	1172	12
CRYSTAL Y1 (NX20125A)				Supplier	Base ceramic	MANGANESE OXIDE	1317-34-6		0.070	mg	2009	20
CRYSTAL Y1 (NX20125A)				Supplier	Base ceramic	ALUMINA	1344-28-1		1.970	mg	13730	137
CRYSTAL Y1 (NX20125A)				Supplier	Base ceramic	COLLOIDALSILICA	7631-86-9		0.070	mg	373890	3722
CRYSTAL Y1 (NX20125A)				Supplier	Base metallization	MOLYBDENUM (Mo)	7439-98-7		0.570	mg	13060	130
CRYSTAL Y1 (NX20125A)				Supplier	Base under plating	Nickel (Ni)	7440-02-0		0.130	mg	97282	968
CRYSTAL Y1 (NX20125A)				Supplier	Base under plating	COBALT (Co)	7440-48-4		0.030	mg	36836	367
CRYSTAL Y1 (NX20125A)				Supplier	Base plating	THALLIUM (Tl)	7440-28-0		0.000	mg	4521	45
CRYSTAL Y1 (NX20125A)				Supplier	Base plating	GOLD (Au)	7440-57-5		0.040	mg	6195	62
CRYSTAL Y1 (NX20125A)				Supplier	Base seal ring	IRON (Fe)	7439-89-6		0.350	mg	68482	682
CRYSTAL Y1 (NX20125A)				Supplier	Base seal ring	Nickel (Ni)	7440-02-0		0.190	mg	18083	180
CRYSTAL Y1 (NX20125A)				Supplier	Base seal ring	COBALT (Co)	7440-48-4		0.110	mg	21600	215
CRYSTAL Y1 (NX20125A)				Supplier	Base solder	Silver (Ag)	7440-22-4		0.280	mg	53413	532
CRYSTAL Y1 (NX20125A)				Supplier	Base solder	Copper (Cu)	7440-50-8		0.050	mg	9377	93
CRYSTAL Y1 (NX20125A)				Supplier	Au electrode	GOLD (Au)	7440-57-5		0.020	mg	4950	49
CRYSTAL Y1 (NX20125A)				Supplier	Cr electrode	CHROMIUM (Cr)	7440-47-3		0.001	mg	130	1
CRYSTAL Y1 (NX20125A)				Supplier	Adhesive	Silver (Ag)	7440-22-4		0.174	mg	12717	127
CRYSTAL Y1 (NX20125A)				Supplier	Adhesive	SILICONE	Proprietary		0.026	mg	4194	42
CRYSTAL Y2 (INX20165A)	Ceramics / Glass	5.972	mg	Supplier	Blank	SILICON DIOXIDE	14808-60-7		0.283	mg	108800	178
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	IRON (Fe)	7439-89-6		0.581	mg	413699	675
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	Manganese (Mn)	7439-96-5		0.005	mg	267293	436
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	Nickel (Ni)	7440-02-0		0.317	mg	81697	133
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	Silicium (Si)	7440-21-3		0.001	mg	34800	57
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	CARBON D	7440-44-0		0.000	mg	61035	100
CRYSTAL Y2 (INX20165A)				Supplier	Cover kovar	COBALT (Co)	7440-48-4		0.185	mg	10892	18
CRYSTAL Y2 (INX20165A)				Supplier	Cover plating	Nickel (Ni)	7440-02-0		0.171	mg	21784	36
CRYSTAL Y2 (INX20165A)				Supplier	Base ceramic	MAGNESIUMOXIDE	1309-48-4		0.007	mg	113183	3733
CRYSTAL Y2 (INX20165A)				Supplier	Base ceramic	MOLYBDENUMTRIOXIDE	1313-27-5		0.012	mg	430600	14203
CRYSTAL Y2 (INX20165A)				Supplier	Base ceramic	MANGANESE OXIDE	1317-34-6		0.082	mg	278207	9177
CRYSTAL Y2 (INX20165A)				Supplier	Base ceramic	ALUMINA	1344-28-1		2.233	mg	85089	2807
CRYSTAL Y2 (INX20165A)				Supplier	Base ceramic	SILICON DIOXIDE	14808-60-7		0.078	mg	34915	1152
CRYSTAL Y2 (INX20165A)				Supplier	Base metallization	MOLYBDENUM	7439-98-7		0.581	mg	27588	910
CRYSTAL Y2 (INX20165A)				Supplier	Base under plating	Nickel (Ni)	7440-02-0		0.220	mg	10207	337
CRYSTAL Y2 (INX20165A)				Supplier	Base under plating	COBALT (Co)	7440-48-4		0.027	mg	20211	667
CRYSTAL Y2 (INX20165A)				Supplier	Base plating	GOLD (Au)	7440-57-5		0.037	mg	850000	5667
CRYSTAL Y2 (INX20165A)				Supplier	Base seal ring	IRON (Fe)	7439-89-6		0.409	mg	33750	225
CRYSTAL Y2 (INX20165A)				Supplier	Base seal ring	Nickel (Ni)	7440-02-0		0.108	mg	36300	242
CRYSTAL Y2 (INX20165A)				Supplier	Base seal ring	COBALT (Co)	7440-48-4		0.129	mg	1650	11
CRYSTAL Y2 (INX20165A)				Supplier	Base solder	Silver (Ag)	7440-22-4		0.319	mg	3300	22
CRYSTAL Y2 (INX20165A)				Supplier	Base solder	Copper (Cu)	7440-50-8		0.056	mg	20000	133
CRYSTAL Y2 (INX20165A)				Supplier	Au electrode	GOLD (Au)	7440-57-5		0.030	mg	15000	100
CRYSTAL Y2 (INX20165A)				Supplier	Cr electrode	CHROMIUM (Cr)	7440-47-3		0.001	mg	40000	267
CRYSTAL Y2 (INX20165A)				Supplier	Adhesive	Silver (Ag)	7440-22-4		0.076	mg	0	
CRYSTAL Y2 (INX20165A)				Supplier	Adhesive	SILICONE	Proprietary		0.025	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)	Ceramics / Glass	0.980	mg	Supplier	Ceramic Bobby	BaO	1304-28-5		0.107	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	Ceramic Bobby	SiO2	7631-86-9		0.405	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	Ceramic Bobby	Al2O3	1344-28-1		0.262	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	Ceramic Bobby	ZnO	1314-13-2		0.080	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	Internal Electrode	Silver (Ag)	7440-22-4		0.034	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	External Electrode	Silver (Ag)	7440-22-4		0.060	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	External Electrode	Nickel (Ni)	7440-02-0		0.011	mg	0	
INDUCTOR X1 (L-07C2N2SV6T)				Supplier	External Electrode	Tin (Sn)	7440-31-5		0.021	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)	Ceramics / Glass	19.791	mg	Supplier	Ceramic Bobby	Barium Oxide	1304-28-5		2.240	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	Ceramic Bobby	Silicon Oxide	99493-55-7		8.522	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	Ceramic Bobby	Aluminium Oxide	1344-28-1		5.506	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	Ceramic Bobby	Zinc Oxide	1314-13-2		1.684	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	Internal Electrode	Silver (Ag)	7440-22-4		0.691	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	External Electrode	Silver (Ag)	7440-22-4		0.546	mg	0	
Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	External Electrode	Nickel	7440-02-0		0.202	mg	0	

Ceramic Antenna ANT1 (2450AT18A100E)				Supplier	External Electrode	Tin (Sn)	7440-31-5		0.400	mg	0	
INDUCTOR L1 (MLZ1608N100LT)	Ceramics / Glass	4.000	mg	Supplier	Ceramic	Ni-Cu-Zn Ferrite	12645-50-0		3.400	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Metals	Silver (Ag)	7440-22-4		0.135	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Metals	Silver (Ag)	7440-22-4		0.145	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Silicon Compounds	Silicon dioxide	60676-86-0		0.007	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Glass Materials	Other	Proprietary		0.013	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Metals	Copper (Cu)	7440-50-8		0.080	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Metals	Nickel (Ni)	7440-02-0		0.060	mg	0	
INDUCTOR L1 (MLZ1608N100LT)				Supplier	Metals	Tin (Sn)	7440-31-5		0.160	mg	0	